J-4698-5-

THE LANCET.

No. 4293. Vol. CLXIX. LONDON, SATURDAY, DECEMBER 9, 1905. [Pp. 120+56.

CONTENTS.

AN ADDRESS on Some Diseases in Relation to Spa Treatment. Delivered at the Opening Meeting of the Harrogate Medical Society on Nov. 4th, 1905, by ARTHUR P. LUFF, M.D., B.Sc.Lond., F.R.C.P.Lond., Physician to St. Mary's Hospital 1667

AN ADDRESS entitled—Are the Problems of Cancer Insoluble? Delivered before the Brighton and Sussex Medico-Chirurgical Society on Dec. 7th, 1905, by E. F. BASHFORD, M. D. Edin., General Superintendent of Research, and Director of the Laboratory, Imperial Cancer Research Fund..... 1670

ORIGINAL ARTICLES

On the General Principles of the Therapeutic Inoculation of Bacterial Vaccines as Applied to the Treatment of Tuberculous Infection. By A. E. WRIGHT, M.D. Dub., sometime Professor of Pathology, Army Medical School, Netley; Pathologist to St. Mary's Hospital, London, W. (*Concluded*) 1674

A Study of Some Points in Relation to the Administration of Tuberculin (T.R.) Controlled by Observation of the Opsonic Index in Pulmonary Tuberculosis. By DAVID LAWSON, M.A. St. And., M.D. Edin., F.R.S. Edin., Senior Physician to the Sanatorium at Banchory, Scotland; and IAN STRUTHERS STEWART, M.D. Edin., Clinical Pathologist to the Sanatorium at Banchory, Scotland. — (*Illustrated*)..... 1679

Notes on a Case of Syringomyelia. By ARTHUR D. KETCHEN, M.B.Lond., Hon. Visiting Physician, New Somerset Hospital, Cape Town.—(*Illustrated*)..... 1685

CLINICAL NOTES:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A Case of Imitation of the Kidney Caused by Urotropin. By T. WILSON PARRY, M.D. Cantab. 1686

A Case of a Sharp Foreign Body Swallowed and Subsequently Passed in the Natural Manner. By R. A. BELILIOS, M. D. Edin., F.R.C.S.Edin. 1687

A Case of Clay-coloured Stools without Jaundice but attended with Copious Bilious Vomit. By W. GORDON, M. D. Cantab., F. R. C. P. Lond., Physician to the Devon and Exeter Hospital.. 1687

MEDICAL SOCIETIES.

PATHOLOGICAL SOCIETY: Columnar-celled Carcinoma of the Testicle.—Giant Cells in Tumours of the Thyroid Gland.—Tuberculous Adenitis with Congenital Bronchiectasis and Cirrhosis of the Liver and Pancreas.—Exhibition of Specimens..... 1688

LIVERPOOL MEDICAL INSTITUTION: Friedreich's Ataxia.—Massage and Exercise Treatment.—Exploratory Puncture of the Chest.—Internal Derangement of the Knee-joint 1689

WINDSOR AND DISTRICT MEDICAL SOCIETY: Hæmorrhagic Pancreatitis... 1689

LEEDS & WEST RIDING MEDICO-CHIRURGICAL SOCIETY: Exhibition of Cases and Specimens..... 1690

ANATOMICAL SOCIETY: The Surgical Anatomy of the Prostate 1690

SOCIETY OF ANÆSTHETISTS: The Evolution of Ethyl Chloride, its Uses and Abuses 1690

ÆSCULAPIAN SOCIETY: Uterine Cancer: Some Points in its Pathology and Treatment 1691

OTOLOGICAL SOCIETY: Annual General Meeting ... 1691

WEST LONDON MEDICO-CHIRURGICAL SOCIETY: Jamaica as a Health Resort... 1691

REVIEWS AND NOTICES OF BOOKS.

Les Actualités Medicales: 1. Technique de l'Exploration du Tube Digestif. Par le Dr. René Gaultier. 2 Trachéo-bronchoscopie et Œsophagoscopie. Par le Dr. Guisez ... 1691

Hygiène et Pathologie Cutanées du Premier Age. Par le Dr. Paul Gaston..... 1692

A Practical Treatise on Diseases of the Skin for the Use of Students and Practitioners. By James Nevins Hyde, A.M., M.D.; and Frank Hugh Montgomery, M.D. Seventh Edition 1692

Practical Massage in Twenty Lessons. By Hartvig Nissen 1692

Contributions to Clinical Surgery. By James Crawford Renton, M.D. Edin., F.F.P.S. Glasg. 1692

A Nurse's Guide for the Operating Room. By Nicholas Senn, M.D., Ph.D., LL.D., C.M. Second Edition 1693

Heredity. By C. W. Saleeby, M.D. Edin. 1693

Edinburgh Medical Journal ... 1693

The Scottish Medical and Surgical Journal 1693

NEW INVENTIONS.

A New Forceps for Hæmorrhoids.—(*Illustrated*) 1693

LEADING ARTICLES.

ERRORS IN DIAGNOSIS OF NOTIFIABLE DISEASES..... 1710

OLD AGE 1711

PERSONATION, FORGERY, AND PERJURY 1712

ANNOTATIONS.

The Resignation of the Government 1713

Security of Tenure for Medical Officers of Health 1713

November at Home and Abroad 1714

Giemsa's Stain..... 1714

Are Effluvia Particulate? 1715

The Milk Supplied to the City of London 1715

A Conference on Smoke Abatement 1716

Amblyopia due to the Fumes of Wood Alcohol..... 1716

What is Whisky? 1716

Epsom College..... 1717

The Fifteenth International Congress of Medicine, Lisbon, 1906 1717

"Trade Impressions" 1717

Pneumococcic Septicæmia 1717

The Alleged Pollution of Figs.. 1718

The Question of an Open-air Sanatorium for Blackburn 1718

The Limitations of Chloride of Zinc as a Deodorant, Antiseptic, and Germicide 1718

Hygiene for Teachers 1719

Mediterranean Fever 1719

THE GENERAL MEDICAL COUNCIL.

Penal Cases 1694

Report of the Public Health Committee 1696

Dental Business 1697

Revision of Standing Orders ... 1698

Notices of Inquiry in Penal Cases 1699

Warning Notice to Practitioners 1699

Recognition of Japanese Qualifications..... 1700

Suggested Students' Registration Fee 1701

The Medical Curriculum..... 1702

Representation of the University of Sheffield 1703

Report of the Education Committee..... 1703

Returns from Navy, Army, and India Boards 1704

Army Medical Service 1704

Inspection of Examinations of the University of Edinburgh 1704

Glasgow Degree of B.Sc. in Public Health 1707

Irish Poor-law Medical Service 1707

SPECIAL ARTICLES.

Medicine and the Law..... 1709

The Tuberculous Children of the Metropolis..... 1720

Security of Tenure for Medical Officers of Health and Sanitary Inspectors 1721

Medico-Psychological Association of Great Britain and Ireland 1721

Irish Medical Schools and Graduates' Association..... 1722

Asylum Reports 1723

The Services..... 1724

Cholera and Plague in Europe and the East..... 1730

The Public house as a Factor in the Spread of Disease..... 1731

Manchester 1732

Liverpool 1732

Leeds 1732

Northern Counties Notes 1733

Wales and Western Counties Notes 1733

Scotland..... 1734

Ireland 1734

Paris 1735

Italy 1736

Vienna 1737

New York 1738

LOOKING BACK.

(From THE LANCET, Saturday, Dec. 8th, 1827)..... 1721

VITAL STATISTICS:
Health of English Towns ... 1723
Health of Scotch Towns 1725
Health of Dublin 1725

CORRESPONDENCE.

The Proposed Amalgamation of the London Medical Societies (Sir R. Douglas Powell, Bart., Dr. G. Crichton)..... 1725

The Decline of Art in Medicine (Mr. R. Brudenell Carter) ... 1725

The Feeble-minded Criminal (Dr. Edwin Goodall)..... 1727

Epsom College (Sir Constantine Holman)..... 1727

The Royal Commission on Poor-law (Mr. F. R. Humphreys) 1727

"Maternal Impressions" (Mr. G. Francis Smith) 1728

A New Surgical Dressing—Mica (Mr. Arthur Todd-White) 1728

Spirochæte Pallida and Leishman-Donovan Bodies (Dr. F. G. Bushnell) 1728

Royal College of Surgeons of England (Dr. W. G. Dickinson) 1728

The Action of the External Muscles of the Eye, and the Diagnosis of Ocular Paralysis (Dr. R. Bruce Ferguson) 1729

The Inverse Relations between Pyrexia and Gout (Dr. Francis Hare) 1729

Seville as a Winter Resort (Mr. John Dalebrook) 1729

Tetanus and Antitoxin..... 1729

A Question of Precedence 1743

The London Temperance Hospital and Temperance Statistics (Dr. Dawson Burne)... 1743

A Point of Diagnosis..... 1743

The Treatment of Convulsions in Infants (Mr. Edgar R. Ivatts)..... 1744

MEDICAL NEWS.

Royal Institution 1684

Hammersmith Borough Council and the Diagnosis of Diphtheria 1729

New Hampstead General Hospital..... 1733

New Isolation Hospital at Melton Mowbray 1735

Pass lists of the Universities of Oxford, Cambridge, and Birmingham, and Trinity College, Dublin 1739

Foreign University Intelligence 1739

Deaths of Eminent Foreign Medical Men..... 1740

Sleeping Sickness in Uganda... 1740

Society of Arts..... 1740

Presentation to a Medical Practitioner 1740

The Middlesex Hospital 1740

Central Midwives Board..... 1740

Donations and Bequests..... 1741

Public Health in Cyprus..... 1741

The Princess Christian Cottage Hospital, Sierra Leone..... 1741

Books, &c., received 1741

Appointments 1742

Vacancies 1742

Births, Marriages, and Deaths.. 1742

Notes, Short Comments, and Answers to Correspondents.. 1743

Medical Diary 1744

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS

COVER.

ADLARD & SON:—
Bland-Sutton Beaver on Hysterectomy 1
Collins ..... Crystalline Lens in Health, &c. 1
Lingard .... Burnall 1

ARNOLD:—
Howard .... Surgical Nursing 1

BAILLIERE, TINDALL & COX:—
Reclus ..... Hernia 1
" ..... Descended Testis 1
Hutchinson .... The Conjunctiva in Health, &c. 1
Mayo-Collier Mouth Breathing 1
" Chronic Progressive Deafness 1
Turner ..... Appendicitis 1

BALE, SONS & DANIELSSON:—
Moullin .... Inflammation of the Appendix 1
" .... Treatment of Gastric Ulcer 1

CHURCHILL, J. & A.:—
Transactions of the Ophthalmological Society of the United Kingdom 1

CONSTABLE & CO.:—
Battle & Corner .... Diseases of the Appendix Vermiformis 1
Laumonier.. New Methods of Treatment 1
Wright..... Anti-Typhoid Inoculation 1

CLAISHER:—
Herschell .. Indigestion 1
McLatchie .. Electrolysis 1

KIMPTON:—
Sandwith.... Medical Diseases of Egypt 1

LEWIS:—
Moullin .... Enlargement of the Prostate 1
" .... Inflammation of the Bladder 1

LONGMANS, GREEN & CO.:—
Findlay .... Physical Chemistry 1

PENTLAND, Y. J.:—
Bruce ..... Principles of Treatment 1
Waring..... Operative Surgery 1

SAUNDERS & CO.:—
Seaside Books 1

MEDICAL LIBRARIES, &c.:—
Davidson—Sight-Testing for the G.P. 1
O'Connor Extension Co.—
Mechanical Orthopædics 11
Prince's Medical Book Club 1

BAILLIERE, TINDALL & COX:—
Hirst ..... Constipation 10
Edwards .... Carcinoma of the Rectum 10

Macnaughton-Jones.... Diseases of Women 12
Owen..... Cleft Palate, &c. 12
Thorne..... Nauheim Treatment... 10
Vincent .... Nutrition of the Infant 12

BALE, SONS & DANIELSSON:—
British Gynæcological Journal 10

CASSELL & CO.:—
Bruce ..... Materia Medica, &c. 9
Herman .... Diseases of Women 11
Hutchison & Rainy .. Clinical Methods 9
Luff & Page.. Manual of Chemistry .. 9
Morris, H.. .. Surgery of the Kidney and Ureter 12
" .. Injuries and Diseases of Genital, &c., Organs . 12
Morris, M. .. Diseases of the Skin 11
Owen..... Surgical Diseases of Children 12
Shaw ..... Organo Therapy 9
Waugh & Kenwan Hygiene &c. 9

CHURCHILL, J. & A.:—
Bunch ..... Treatment of Mentally Feeble Children 8
Berry, J. .... Surgical Diagnosis 6
Bettis ..... Malignant Disease... 10
Craig.... Psychological Medicine 6
Cuthpe ..... Diseases of the Rectum 12
" ..... Cancer of the Rectum.. 12
Darwin, E. H. .... Operative, &c., Tumours 6
" .... Urinary Diseases 6
" .... Electric Cystoscopy 6
" .... Ulceration of the Bladder 6
" .... Tumours of the Bladder 6
" .... Clinical Cystoscopy 6
" .... Ureteric Mantoscopy .. 6

CHURCHILL.—(Continued).
Galabin .... Manual of Midwifery .. 8
" .... Diseases of Women 8
Haig ..... Diet and Food 6
" ..... Uric Acid 6
Harrison .. Refraction of the Eye .. 6
" .. The Ophthalmoscope .. 6
Lang & Abrahams.. German-English Dictionary of Terms..... 6
Morris ..... Anatomy 8
Notter, Firth & Horrocks Hygiene..... 8
Savill ..... Clinical Medicine 8

GRIFFIN & CO.:—
Davis ..... Biology 9
Elborne .... Pharmacy, &c. 9
Stirling..... Practical Physiology .. 9

HARRISON & SONS:—
Morris, H. .. Financial Relations between London Hospitals, &c. 12

KEGAN PAUL & CO:—
Taylor ..... Diseases of the Eye ... 11

LEWIS:—
Binnie ..... Operative Surgery..... 8
Powell, Sir R. D..... Treatment of Diseases, &c., of the Heart 8
Rawling .... Landmarks, &c. 8
Roberts, F.T. The Theory and Practice of Medicine 8
Sorlin'g .... Treatment of Diseases of the Nervous System .. 8
" .... Diseases of the Brain and Spinal Cord 8
" .... On Periodical Headache or Migraine 8
" .... On Epilepsy 8
" .... On Movable Kidney 8
Woakes .... On Deafness, &c. 8

LONGMANS, GREEN & CO.:—
Ashby & Wright.... Diseases of Children.... 8
Coats..... Manual of Pathology .. 8
Dakin ..... Handbook of Midwifery 8
Dickinson .. Renal and Urinary Affections 8
Gray ..... Anatomy 8

LONGMANS.—(Continued).
Halliburton.. Chemical Physiology .. 8
Robbins..... Essentials of Bacteriology 8
Seale & Colyer .... Diseases of the Teeth .. 8
Stevenson .. Wounds in War 8

MACMILLAN & CO.:—
Brunton, Sir T. L. .... Disorders of Assimilation, Digestion, &c. .. 8
" .... Text-book of Pharmacology, &c. 8
" .... Disorders of Digestion 8
" .... Pharmacology &c. 8
" .... Materia Medica 8
" .... Modern Therapeutics .. 8
" .... Lectures on the Action of Medicines 8
Crichton-Browne .. Prevention of Senility . 8
Flint..... Handbook of Physiology 8
Manual of Medicine 8
New System of Medicine 8
Smith ..... Differential Diagnosis.. 8
Stenhaus .... Manual of Surgery 8

MEDICAL PUBLISHING CO.:—
Lane ..... Chronic Constipation .. 12
" ..... Cleft Palate and Harelip 12

RENSHAW:—
Green .... Pathology, &c 10
Matthews .. Management of Tumours 12

SAUNDERS & CO.:—
Friedenwald & Ruhrah.. Diet 7
International Text-book of Surgery .. 7
Montgomery's Practice..... 11
Piney & Cadwell .. X-Rays 7

SMITH, ELDER & CO.:—
Keetley .... Orthopædic Surgery.... 11
" .... Gastric Ulcers 11
" .... Complicated Fractures 11

MEDICAL LIBRARIES, &c.:—
Behnke—Stammering 10
Gilchrist—Students' Reminders .. 10
Institute of Hygiene—
The Cytotoxic Handbook..... 12
Lewis's Medical and Scientific Library 11

OFFICIAL AND GENERAL ANNOUNCEMENTS.

APPOINTMENTS VACANT:—
Army Medical Service 12
Bromley and Districts Medico Ethical Society..... 90
Tonbridge Cumberland..... 94
Carmarthenshire and Aberdovey Infirmary Bangor 93
Dreadnought Lonsita', Greenwich.... 15
Hospital for Sick Children, Great Ormond-street 94
Laboratory of Pathology and Public Health 92
Liverpool Infirmary for Children 93
Manchester Children's Hospital 14
Middlesex Hospital (Junior Wing) 13
National Hospital for the Paralysed, &c., Queen-square 97
Norfolk and Norwich Hospital 12
Northampton General Hospital 89
North-eastern Hospital for Children, Hackney-road 15
No. 898, L.G., Strand..... 15
Princess Christian Hospital, Freshwater
Roy l Alexandra Hospital for Sick Children, Brighton 93
Royal Free Hospital Gray's Inn-road 93
Royal Sea Bathing Hospital, Margate 93
Royal Victoria Hospital, Bournemouth 93
Salford Royal Hospital 93
S. Devon and E. Cornwall Hospital, Plymouth 94
Stockport Infirmary 93
Sussex County Hospital, Brighton.... 93
Tottenham Hospital 93
University of London 93
Wandsworth Union Infirmary..... 93

ASSISTANCIES, MEDICAL 90

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 74
Barham House 74
Barnwood House Hospital..... 75
Bedford House, Brighton 80
Bethel Hos. for Mental Diseases 81
Bishopstone House, Bedford..... 4
Bramingham House Retreat, Dublin 82
Camberwell House, Peckham-road 81
Carrigna, Dunmarron 82
Clarence Lodge, Clapham-park 80
Colyer, Dorchester 82
Coppice, The, Nottingham..... 15
Cotswold Sanatorium 9
Crooksbury Sanatorium, Surrey..... 78
Dairymple House, Rickmansworth .. 82
Denver Johns' Sanatorium, Parkstone 76
Dijon Bichond, Chinon 81
Dr. Hoadley's Sanatorium, Darlington 79
East Anglian Sanatorium, Norland .. 77
Electrical Ozone and Light Treatment 81
Electrical Institute, Gloucester-place 93

ASYLUMS.—(Continued).
Flower House, Catford 75
Grove House, Church Stretton 79
Grove, The, Catton, Norwich 75
Gulley Sanatorium, Oxon. 78
Haydock Lodge, Newton-le-Willows 76
Haydon, Revd. 81
Higham Hall, Norwich 74
High Shot House, Twickenham 84
Hitch, Mrs., Hollington 15
Home of Good Hope, Bournemouth .. 82
Home Sanatorium, Bournemouth 77
Inverurith Lodge Retreat, Colinsburgh 16
Jamieson, Temple 81
King Turner, Cheltenham 84
Kingwood Sanatorium, Pepper Common 79
Lady Superintendent, Brighton 81
Lady superintendent, Streatham 81
Lawson, Nostrach-on-Dee, Banchory 78
Leigh House, Warwick 81
London Fever Hospital 93
London Open - Air Sanatorium, Wokingham 78
Lofthaus Open Air Sanatorium, Porlbury 77
Melbourne House, Leicester..... 76
Mendip Hills Sanatorium, Wells 79
Middleton Hall, Co. Durham 82
Midland Open-Air sanatorium, Belmont 77
Miss G. Fox's Nursing, &c., Home, H. Frexley 81
Moat House, Tamworth 76
Moorcote Open - Air Sanatorium, Byerley 76
Nordrach-upon-Mendip Sanatorium.. 77
Northlands Retreat, Wansworth 82
Northumberland House, Finsbury-park 81
Northwood House, Winterbourne 76
Norwood Sanatorium 76
No. 763, L.G., Strand..... 84
No. 804, L.G., Strand..... 84
No. 813, L.G., Strand..... 84
No. 855, L.G., Strand..... 84
Oehill Hills Sanatorium, Blaenau-Ffestiniog 78
Overdale, Whitefield..... 76
Plas-yn-Dinas, Merionethshire 77
Plympton House, South Devon 76
Rosemoor Open-Air Sanatorium, Co. Down 76
Shaftesbury House, Formby 77
Springfield House Private Asylum, Bedford 74
St. Andrew's Hospital, Northampton 75
St. Luke's Hospital, E.C. 15
Ser ier, Craven-street..... 82
Se ne House, Canterbury 80
Stretton House, Church Stretton 5
Thunderclife Grange, nr. Rotherham 80
Tower House, Leicester 15

MEDICAL SCHOOLS (London):—
Cooke's School of Anatomy 70
West London Post-Graduate College.. 70

NURSING INSTITUTES:—
Asa Lewis Nurses' Institute..... 13
Clapton Nursing Home 13
General Nursing Association 3
Hos. for Sick Children, Gt. Ormond-st 72
Hunt-ton's Nursing Agency 14
Leeds Trained Nurses' Institution.... 13
London Nurses' Association 2
Male and Female Nurses' Assoc. 13
Male Nurses' Association 73
Male Nurses' Co-operation..... 73
Middlesex Hos. Trained Nurses' Inst. 72
Mildmay Nursing Institute 14
Nurses' Co-operation, Portland-place 13
Queen Charlotte's Lying-in Hos..... 73
Registered Nurses' Society 13
St. Bartholomew's Hos. Nurses' Inst. 14
St. John's House 74
Temperance Male and Female Nurses' Co-operation 73
Temperance Male Nurses' Co-operation 73
Temperance Nursing Society 13

OFFICIAL NOTICES:—
Central London Throat and Ear Hospital 70
Mount Vernon Hospital for Consumption, &c. 70
New York Post-Graduate Medical School and Hospital 10
Pathological Laboratories, Langham-place 10
Rev. John Brewster Beresford—Information wanted 70
Royal College of Surgeons of England 71
Royal Eye Hospital, Soho 71
Royal London Ophthalmic Hospital... 71
Royal Naval Medical Examinations .. 71
University of Cambridge..... 71

PARTNERSHIPS & PRACTICES 90

RAILWAY & STEAMSHIP CO.'S:—
Booth S.S. Co.'s Tours 82
New Zealand Shipping Co..... 82
Royal Mail Steam Packet Co.—Tours 82

SCHOOLS, PREPARATORY, &c.:—
Framlingham College, Suffolk 71
Manchester Physical Training College 71

TUTORS & LECTURERS:—
Beckton 12
Personality 72
Bosch 71, 72
Ca. l 72
No. 878, L.G. .. 72
No. 898, L.G. .. 72
Passmore Edwards Settlement 72
The Firs 72
Wentworth 70

(For Index to Trade and Miscellaneous Advertisements see page 4.)

H. K. LEWIS'S PUBLICATIONS.

NOW READY. TENTH EDITION.

Two Volumes, thoroughly revised, with Illustrations, Medium 8vo, 26s. net.

THE THEORY & PRACTICE OF MEDICINE.

By FREDERICK T. ROBERTS, M.D., B.Sc., F.R.C.P.,

Fellow of University College; Emeritus Professor of Medicine and Clinical Medicine at University College, &c.

The Regius Professor of Medicine at Oxford writes:—"It is a capital book in every respect, and well worthy of the confidence, so long enjoyed, of students and practitioners."

JUST PUBLISHED. SECOND EDITION.

With 25 Plates (3 in Colour), comprising 31 Figures, thoroughly revised, demy 8vo, 5s. net.

LANDMARKS & SURFACE MARKINGS OF THE HUMAN BODY.

By LOUIS B. RAWLING, M.B., B.C. (Cantab.), F.R.C.S. (Eng.),

Assistant Surgeon, Demonstrator of Practical Surgery, and Senior Demonstrator of Anatomy, St. Bartholomew's Hospital; late Hunterian Professor, Royal College of Surgeons, England, &c.

JUST PUBLISHED. SECOND EDITION.

Fully Illustrated. Post 8vo, bound leather, gilt edges, 12s. 6d. net.

MANUAL OF OPERATIVE SURGERY.

By JOHN FAIRBAIRN BINNIE, A.M., C.M. Aberd.,

Professor of Surgery, Kansas City Medical College, &c.

"This excellent book. ..... The style is succinct and no unnecessary word is used. In most operations the description is divided into 'steps,' and this certainly makes it much easier for the reader to follow. The illustrations are numerous, and some of the diagrams are very happy and likely to prove of great service. ..... All the newest operations and methods are included, and it is remarkable how much is contained in the book."—THE LANCET, Nov. 11th, 1905.

Crown 8vo, 7s. 6d.

On the Treatment of Diseases of the NERVOUS SYSTEM. By C. W. SUCKLING, M.D. Lond., M.R.C.P., Consulting Physician to the Queen's, to the Children's, and to the Orthopædic and Spinal Hospitals, Birmingham.

On the Diagnosis of Diseases of the Brain, SPINAL CORD, and NERVES. By the same Author. With Illustrations. New Edition in preparation. Crown 8vo, 8s. 6d.

Movable Kidney: A Cause of Insanity, Headache, Neurasthenia, Insomnia, Mental Failure, and other disorders of the nervous system; a Cause also of Dilatation of the Stomach. By the same Author. Now ready. With Illustrations in half-tone, &c. Demy 8vo, cloth, 10s. 6d. net.

Demy 8vo, 1s.

On Periodical Headache, or Migraine.

On Epilepsy. Demy 8vo, 1s.

With Coloured Diagrams, demy 8vo, 6s.

The Lumleian Lectures on the Principles which GOVERN TREATMENT in DISEASES and DISORDERS of the HEART. By Sir RICHARD DOUGLAS POWELL, Bart. K.C.V.O., M.D. Lond., F.R.C.P., Physician Extraordinary to His Majesty the King; Consulting Physician to the Hospital for Consumption, Brompton, and to the Ventnor Hospital, &c.

FOURTH Edition, with Illustrations, 8vo, 10s. 6d.

On Deafness, Giddiness, and Noises in the HEAD. By EDWARD WOAKES, M.D. Lond., Senior Aural Surgeon, London Hospital; Lecturer on Diseases of the Ear, London Hospital Medical College; assisted by CLAUD WOAKES, M.R.C.S., L.R.C.P., Assistant Surgeon to the London Throat Hospital.

"It is not every day that we have the pleasure of perusing a book which might serve as a model of what a medical treatise ought to be. Throughout it is a closely reasoned sequence of statements, precise and logical, with little or no redundancy or padding."—JOURNAL OF MENTAL SCIENCE.

**** *Complete CATALOGUE of Mr. LEWIS'S PUBLICATIONS post free on application.*

London: H. K. LEWIS, 136, Gower Street, W.C.

INDEX—(CONTINUED).

TRADE AND MISCELLANEOUS ADVERTISEMENTS.

COVER.

PAGE

CHEMISTS & DRUGGISTS:—
Brin Oxygen Co.—
Brin's Oxygen ... 111
Vinolia Co., Ltd.—
Household Soaps ... 11

FOODS:—
Fairchild Bros. & Foster—
Phosferene ... 1v
Fry's Malted Cocoa ... 111
Valentine's Meat Juice Co.—
Meat Juice ... 111

AMBULANCES:—
St. John Ambulance—
Invalid Carriages ... 14

BILLIARD TABLES &c.:—
Riley, Ltd.—
Billiard and Dining Tables ... 83

BOTTLE MERCHANTS:—
Isaacs ... 13
Islington Glass Bottle Company ... 87
Kilner Bros., Ltd. ... 14

CARRIAGES, MOTORS, &c.:—
Armstrong—
Coachmen's and Grooms' Liveries 14
Masterton & Co.—
Carriages for sale ... 14
Mayfarers & Son—
Ripon Buggy ... 14
Star Motor Agency—
Motor Cars ... 14
W. Gordon, Grosvenor, Portman Square—
Broughams and Carriages ... 14

CHEMISTS & DRUGGISTS:—
Allen & Hanburys—
Allenburys Throat Pastilles ... 39
Byno-Hypophosphites ... 40
Byno ... 41
Solazzi ... 96
Andrea & Andrea—
Bromabolids ... 34
Antiseptic Chemical Co.—
Antiseptic Tablets ... 39
Armour & Co.—
Lactated Pepsin ... 31
Essence of Pepsin ... 31
Battle & Co.—
Bromidia ... 26
Battley's Liquors ... 42
Bayer Co.—
Aleetas ... 39
Aspirin ... 39
Piperazine Bayer ... 39
Heroin Hydrochloride ... 39
British Druggists—
Hypogen ... 62
Bilogen ... 62
Bulloch & Co.—
Pepsine Powd ... 62
Acid Glycerine of Pepsine ... 62
Burgoyne, Burbidges & Co.—
Unguentum Hayden ... 53
Novargan ... 53
Salocreol ... 53
Digestal ... 53
Salit ... 73
Burroughs Wellcome & Co.—
Christmas & New Year's Gifts .. 44, 45
Saxin ... 43
Menthol Snuff ... 43
Myrmin ... 43

CHEMISTS—(Continued):
Candel Deeds—Candel ... 83
Chemical Works—Formwa... ... 84
Cleasby & Co.—
Glyco-Heroin ... 34
Glyco-Thymoline ... 34
Ipracide Paste ... 84
Comar & Son—
Nourry's Iodinated Wine ... 40
Cacodylate of Sodium (Ellis) ... 40
Lecithine (Chin) ... 40
Cosmo Chemical Co.—
Kuna ... 63
Denver Chemical Co.—
Antiphlogistine ... 32
Glenfield's Fluid Magnesia ... 61
Grimsa, Fleckhart & Co.—
Chloroform ... 37
Chloryl Anesthetic ... 37
Hynds Bois Lescott & Wright, Ltd.—
Charcol. Oil Santal, Tiny ... 28
Fellows—Syr. Hypophos. Co., Fellows 17
Gerrard & Co.—Kolene ... 15
Hewlett & Son—
Mist. Pepsinæ Co. c. Bismuthe ... 42
Meyer & Co.—Hedo-tathes ... 61
Hudson—Hamenthol Pulsbes ... 55
Kirby & Co.—
Glycosota ... 43
Knoll & Co.—Antifebrol ... 15, 67
Kreochyle Co.—
Surf Buro-Glycerine ... 66
Malzine Manufacturing Co.—
Malzine with Cod Liver Oil ... 47
Mather, Lester & Bruning—
Iodiform-Rochelle ... 32
Migraine ... 37
Orthoform ... 32
Thyl-Menthol ... 32
Albargin ... 32
Pyramidon ... 32
Saprarenin ... 32
Holocaine ... 32
Newbery & Sons—
Pulvis Jacobi Ver. ... 61
Parke, Davis & Co.—
Bromidia ... 31
Elixir Maraon & Salicylates ... 31
Cascara Evacuant ... 31
Pond's Extract ... 17
Raimes & Co.—
Glisgar's Nutrient Suppositories. 61
Salamon & Co.—Purest Chl. Coform .. 42
Santalogen Co.—Santalogen ... 52
Savory & Moore—
Pancreatic Emulsion ... 30
Scott & Bowne—
Scott's Emulsion ... 10
Squire & Sons—
Cyamalins Compounds ... 37
Terpenin Therapy ... 37
Thyroid ... 37
Phosphate Preparations ... 37
Tamar Iodi.e Grillon ... 10
Wright, Layman & Umney—
Wright's Coal Tar Soap ... 54
Zimmermann, A. & M.—
Bain-Bouillon-Lactate ... 80

FILTERS:—
Defries & Son—
Lipscombe & Co.'s Apology ... 59

FOODS:—
Allen & Hanburys—
Allenburys Milk & Cereal Diet.... 31
Aylesbury Dairy Co.—
Humanised Milk ... 49
Benger's Food, Ltd.—
Benger's Food ... 13

FOODS—(Continued).
Blanchley's Diabetic Preparations ... 68
Boothroyd & Co.—
Lymgon Biscuits ... 69
Nursery Biscuits ... 69
Borrill (Leeds)—Invalid Sweet ... 43
Brand & Co.—Fever Food ... 61
Cadbury's Cocoa ... 61
Calder's Milk Chocolate ... 46
Callard & Co.—
New Diabetic Foods ... 68
Carnick & Co.—
Liquid Peptonite ... 47
Carter & Co.—Nursery Milk ... 45
Fairchild Bros. & Foster—
Phosferene ... 32
Foods, Ltd.—
Monkeys Food ... 64
International Pleasure, Ltd.—
Fly-Away ... 17
MacFarlane, Lang & Co.—Biscuits ... 66
Nestlé—Milk Food ... 27
Oxo ... 64
Robb & Co.—Foods ... 62
Theinhardt's Food Co., Ltd.—
Hygienic ... 65
Tibbles' Vi-Cocoa, Ltd.—Vi-Cocoa.... 20
Van Abbott & Son—Gluten Flour.... 65
Virol, Ltd.—Virol ... 22
Wander & Son—
Hemmatosed Milk ... 21
Ames' Milk ... 21

FURNITURE, &c.:—
Carter—Invalid Furniture ... 15
Maple & Co.—
Card Tables ... 59

HOSIERS, &c.:—
Cash—
Invalid's Nightdress ... 13
Walkable Maternity Blanket ... 13

MED. & SURG. APPLIANCES:—
Bailey & Son—
Aseptic Hospital Furniture ... 12
Vertilite Trusses ... 18
Beaty & Martin—
Dry Cell Faradic Battery ... 68
Bowa & Son—
Superpable Dressing ... 16
Hogg & Co.—
Elastic Water or Air Beds ... 18
Maw, Son & Sons—
Artificial Limbs, &c. ... 66
May, Roberts & Co.—
Absorbent Tissue ... 72
Cotton Wools ... 62
Gamgee Tissue ... 8c
Lints ... 92
Waterproof Dressings ... 88
Millikin & Lawley—Oncology, &c. ... 67
Pope & Plante—
Elastic Stockings ... 17
Abdominal Supporting Belts ... 67
Robinson & Sons—Gamgee Tissue ... 66
Thermogene Co.—Thermogene ... 16
Wood—
Eureka Crêpe Velpeau Bandages... 13

MINERAL WATERS:—
Contrexeville Pavilion ... 12
Davis—Thermo Water ... 69
Geary & Son—Piperazine Water ... 65
Ingram & Royle, Ltd.—
Carabad Salt ... 57
Royal ... 57
Robinson's Concentrated Waters ... 64

MUSICAL INSTRUMENTS:—
Marshall—
Aeolian Piano Player ... 51

PRINTERS & ENGRAVERS—
Cocks & Co.—
Swan Wheat Plates and Lamps 12
Maring—Brass Door Plates ... 13

SANITARY APPLIANCES, &c.:—
Armand Patent Milk Sterilizer Co.—
Milk Sterilizer ... 37
Condy's Fluid Woodbs—
Condy's Crystals ... 69
Pierson—Maskell Process for Supplying Hot Air ... 68
Spottiswoode & Sanday—
Asphalt ... 66
" Pioneer, &c. ... 66

STATIONERY, &c.:—
Carson, Lloyd & Macgregor—
Argyomeer Fountain Pen ... 67
John Heath & Co.—Pens ... 66
Perkins & Co.—
Do. Icers' Nibs ... 19

TAILORS, BOOTMAKERS, &c.:—
Anderson's Bristol Rubber Co.—
Norsolus Waterproofs ... 13
Emerson Boot Store—
Emerson Boots ... 67
Hamilton & Co.—Tailors ... 14
Russian Fur Co.—
Gentlemen's Fur-lined Overcoats 13

TOBACCO, CIGARS, &c.:—
Andiamo & Co.—
Margiana Cigars ... 64

VACCINE LYMPH:—
Allen & Hanburys—
Calf Lymph ... 66
Agency for Pure Vaccine Lymph ... 66
Rino-Bivalent Calf Vaccine ... 61
Jennet—Lovibond for Calf Lymph 61
Coleman—
Glycerinated Pure Calf Lymph .. 66
Renner's Calf Lymph Establishment.. 67
Wyleys, Ltd.—Calf Lymph ... 61

WATCHMAKERS, &c.:—
Benson—Doctor's English Watch 69

WINES, BEER, SPIRITS, &c.:—
Black & Co.—
"G. B." Diabetic Whisky ... 65
Bishop & Sons—
Brut-Royal ... 58
Brown & Pank—
Fine Vintage Brandy ... 63
Cockburn—
Special Scotch Whisky ... 61
Gautier's Liqueur Brandy ... 63
Martell's Three Star Brandy ... 58
Simpson & Co.—Scottish Whisky ... 63

MISCELLANEOUS:—
No. 704, L.G., Strand—
Cancer Treatment ... 51
No 189, L.G., Strand—
"Sergere" Arm Chair required .. 91
Osborne, Garrett & Co.—
Kropp Razor ... 19

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, *accompanied by a remittance.*

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Order (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith & Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

ADVERTISING.

Books and Publications	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto.	0 5 0
Trade and Miscellaneous Advertisements and Situations Vacant...	Ditto.	0 4 6
	Every additional line	0 0 6

Situations Wanted: First 30 words, 2s. 6d.; per additional 8 words, 3d.
Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

OFFICES: 423 AND 424, STRAND, LONDON, W.C.; AND 1, 2, AND 3, BEDFORD STREET, ADJOINING

An Address

ON

SOME DISEASES IN RELATION TO SPA TREATMENT.

Delivered at the Opening Meeting of the Harrogate Medical Society on Nov. 4th, 1905,

BY ARTHUR P. LUFF, M.D., B.Sc. LOND., F.R.C.P. LOND.,

PHYSICIAN TO ST. MARY'S HOSPITAL.

GENTLEMEN,—When your President honoured me with an invitation to address you at the opening meeting for this session of your society he accompanied the invitation with the suggestion that I should deal with some of the principal diseases and affections treated at the Harrogate spa. However diffident I felt as to my power to deal with the subject in a manner both worthy of your society and of this celebrated spa, yet I accepted the invitation with pleasure, as I am strongly of opinion that those physicians like myself, who, while not practising at any particular health resort, yet are so frequently brought in contact with patients requiring spa treatment, ought not to lose any legitimate opportunity of forcibly bringing home to their medical brethren the great advantages possessed by so many of our British spas, and of impressing upon them that, with the high state of efficiency to which our home spas have been raised, it is no longer essential to banish our patients to foreign health resorts. We wish to make it clear that, unless a complete change of environment is desired by our patients, or is essential to their recovery, treatment can, in the great majority of cases, be carried out as effectually in our own country as abroad.

SPA TREATMENT.

I propose to deal briefly with those diseases and affections, mainly dependent upon defective or faulty metabolism, which are met with amongst the majority of the cases treated at spas and to consider the advantages of spa treatment for patients suffering from such affections.

Spa treatment is a complex treatment made up of several factors and on the correct apportionment of these different factors depends much of the successful issue of the treatment. These several factors are (1) hydrotherapy, which includes the taking of, and the bathing in, the waters; (2) diet; (3) exercise; and (4) accessory forms of treatment, such as electric light baths, electrical treatment, massage, &c. With regard to the drinking of a water at a spa there is a tendency with some medical men to consider that the efficacy of a natural mineral water is due solely to its watery constituent—in other words, that its one therapeutic use is that of a flushing agent. Even so astute a physician as the late Sir William Roberts appears to have held this view. In his Croonian lectures, referring to the employment of the waters of certain spas in the treatment of gout, he said: "Now there can be no reasonable doubt that the efficacy of these springs has nothing to do with their scanty mineral ingredients but depends on their watery constituent. ..... Their action would be to temporarily dilute the blood and lower its percentage of urates and sodium salts. This effect would tend to retard or prevent uratic precipitation, and thus give the defective kidneys additional time to overtake their arrears in the task of eliminating uric acid." I have myself been accused of holding a similar view but I venture to state that the accusation is not justified by anything I have written or said. It is based, I think, on an erroneous conception of the following paragraph in my book on "Gout": "The use of a mineral water, so far as its employment with the object of removing gouty deposits is concerned, lies solely in its watery constituent, and does not in any way depend on the mineral constituents dissolved in it." It will be seen that I am referring here solely to the use of a mineral water as a solvent of gouty deposits, and as regards that very limited use of a water I think it will be generally conceded that the less mineral matter a water has dissolved in it the greater will be its solvent effect on gouty deposits.

IONIC THEORY AND RADIO-ACTIVITY.

If the efficacy of a natural mineral water depended solely on its watery constituent I do not for one moment think that the resort of sufferers to the various natural springs would have successfully stood the test of centuries as it undoubtedly has. The fact is that in judging of the effect of natural mineral waters we have been too much under the domination of analytical chemistry and that our deductions from these results have been consequently biased and cramped. The more I consider the therapeutic effects of the natural mineral waters the more convinced I am, speaking both as a physician and a chemist, that chemical analysis, although it can inform us what are the mineral constituents of the natural waters, is yet unable to determine exactly the state of the salts dissolved in them. The "ionic or electrical dissociation theory" and the existence of the mineral constituents of natural waters as "ions" are leading our thoughts to a new and, I believe, correct appreciation of the therapeutic values of these waters.

An element or a group of elements divorced from the rest of the original molecule is an "ion." According to the ionic theory metallic salts in very dilute solutions are completely split up into their "ions," so that all the properties of these solutions must be the sum of the properties of the separate "ions." In concentrated solutions much of the salt remains in the undissociated state and only a small proportion in the form of dissociated "ions," whereas in most of the natural mineral waters, which are weak solutions of salts, the mineral constituents are mainly, if not entirely in many waters, in the form of "ions" and in this form the therapeutic effects and potency may be quite different from those of the undissociated salts. Ionic dissociation does not, therefore, alter the percentage composition of a salt but may very materially alter its therapeutic properties, so that in all probability the "ions" rather than the salts are responsible in great part for the effects of mineral waters.

In intimate relation with this aspect of the matter is the question of radio-activity in hydrotherapy. Our conception of the atom as an indivisible and finite body is disappearing, and in view of the recent discoveries that have been made in connexion with radio-activity the atom must be conceived as consisting of an aggregate of corpuscles, and each atom has associated with it a definite charge of electricity, such an electrically charged atom being an "ion." The smallest unit of electric charge is known as an "electron," and the atom is charged with a number of these electrons, which are in a state of vigorous motion among themselves within the atom. Radio-activity consists in the flinging away with great violence of actual atoms. The substance left is also radio-active and successive residues continue to exhibit radio-activity, and ultimately one of the residues seems to discharge electrons instead of atoms of matter, thus effecting a transmutation of matter. Now, most, if not all, of the natural mineral waters which have been examined have been found to be distinctly radio-active, and the lower the mineralisation of the water the more intense is its radio-activity. In this, I think, lies the explanation of the fact that an artificially prepared mineral water, although it may be made identical in chemical composition with the natural one, does not possess the same therapeutic effects as the natural water, since it is lacking, at all events to any extent, in the property of radio-activity. A natural water at the moment of its discharge from the earth is radio-active, whereas an ordinary drinking water does not possess this property to any appreciable extent. Hence also the desirability of drinking the water at its source, since by the bottling and keeping of a natural water the radio-activity is to a great extent lost. When we consider the marked influence of radio-active emanations on new growths and various morbid tissues, is it too remarkable to conceive that a radio-active mineral water will exercise a potent effect on those morbid changes within the body which are connected with abnormal tissue metabolism?

BALNEOLOGY.

Useful as may be the drinking of a water at a spa, yet equally, and even in some cases more useful, is the encouragement for therapeutic purposes of the functions of the skin by balneological methods. The skin is the largest organ of the body and, as would be expected of such an organ, it possesses various and complex functions. Amongst

its functions are: (1) the excretion of toxic bodies, the retention of which proves harmful and ultimately fatal to the organism; (2) the power that it possesses through its nerve-endings of stimulating distant organs and tissues; and (3) its heat-regulating power. The success of balneology, whether in the treatment of chronic joint conditions, of affections of the fibrous tissues, of certain heart and kidney affections, and of certain skin diseases, depends upon the recognition of the powerful aid which can be given by the skin in restoring the normal balance.

As regards hydrotherapeutic treatment our British spas are well provided, but in two particulars there is still room for considerable improvements which, in my opinion, will go far to increase the attractiveness of our health resorts—viz., the provision of better dietetic treatment suited to the needs of the patients visiting the spas and the infusion of greater gaiety into the daily life by the provision of more abundant amusements. It is in these two particulars that our spas and health resorts fall short of those on the continent and it is the comparative lack of these two conditions which induces many of our patients to go abroad. At too many of our health resorts one sees nowadays palatial hotels, elaborately upholstered and provided with the prolonged, many coursed, heavy meals which are so absurdly considered by their providers to be essential to physiological necessities and to the recovery of health. I must confess that I should like to see much greater simplicity both in upholstering and in dieting at our spa hotels and probably it would be an advantage to our spas if the catering for the visitors were more or less under the control of the municipal authorities. Medical men would probably then be able to have their views as to the provision of suitable meals for patients much more efficiently carried out than at present, while the cost of living at the spas might be considerably reduced.

GOUT.

Gout is a disease which is due to faulty metabolism, probably both intestinal and hepatic, as the result of which some toxin or toxins are produced and lead to an auto-intoxication, which is an early factor in the development of the gouty condition. This auto-intoxication coincides with or is followed by, in the majority of cases, a deposition of sodium biurate in certain of the joints or tissues which constitutes the climax of the gouty attack. I cannot but think that with our increasing knowledge and experience of the disease uric acid and its salts will in all probability have to be relegated to a position of subsidiary importance in the pathogenesis of gout. The joint manifestations are dependent upon much more general and much larger conditions than a mere excess of uric acid in the blood. The deposition of sodium biurate is merely the sign of the disease, not the essence of it.

For the past few years my thoughts have been directed, with increasing intensity, to the view that the intestinal tract is a very powerful factor, if not the primary factor, in the development of gout. My attention was first directed to this view as the result of some clinical observations I was making in an attempt to explain the action of colchicum in cases of gout. I happened at that time to see some cases of acute colchicum poisoning which in many respects resembled acute arsenical poisoning. In toxic doses colchicum is first a gastro-intestinal irritant; it produces nausea, vomiting, choleraic diarrhœa, and rice-water stools, just as arsenical poisoning does. It also, in sufficient toxic doses, produces cardiac depression, and a bilateral neuritis, similar to that produced by arsenic. If, then, in therapeutic doses, the main action of colchicum is upon the gastro-intestinal canal, its rapid efficacy in cases of gout is possibly due to its effect upon those abnormal intestinal changes which result in the generation of a toxin, which toxin when absorbed causes the gouty attack. This view of the pathogenesis of gout was very ably dealt with by Dr. W. R. Gore in a paper read before the British Medical Association in 1900. In that paper the author stated his view that gout was caused by some product of digestion, either absorbed from the digestive tract or produced by some alteration of metabolism going on in some of the digestive organs; that there must be some body formed in the intestinal canal capable both of causing the symptoms of gout and also of so altering the metabolism of the liver as to cause an increased formation of uric acid. Dr. Gore went on to state that he considered a toxin was the cause of the disease, a product of a definite bacillus, and a product of one of the bacilli normally found in the intestinal canal. A little later in the same year Dr. Le Gendre read a paper at the International Congress of Medicine in Paris, in which he foreshadowed the possible intestinal origin of gout. A year later Dr. D. Chalmers Watson drew attention to this view of the origin of gout. In 1903 there appeared in THE LANCET a most instructive paper by Dr. Woods-Hutchinson[1] in which he stated his view that gout was a toxæmia; that the source of the toxin was the gastro-intestinal tract; that owing to some catarrhal or inflamed condition of that tract, possibly secondary to some chemical changes within that tract, a toxin was produced that was absorbed into the circulation; that if the cells, either the wandering leucocytes of the blood and the lymph or the fixed body cells, could successfully combat and neutralise that poison nothing resulted. He thought probably that such was the case in people who suffered from certain intestinal derangements which quickly passed off, but if the cells were powerless completely to neutralise that toxin, then, as the result of the unaltered toxin that was circulating in the blood and lymph, gout resulted; that the cells, lymphocytes and fixed body cells, which were able to neutralise part of that toxin in neutralising it suffered degradation and degeneration and as a result uric and phosphoric acids, the débris of nucleinic substances, were set free, and that that was the origin of uric acid which in certain cases might be deposited as an after-effect in the form of sodium biurate. Gout, therefore, cannot be regarded as a state of simple malnutrition. It is rather, as Dr. I. Walker Hall has observed, a condition of insufficient cellular resistance against the absorption of intestinal poisons or auto-toxins, characterised by the production of imperfectly formed metabolites, which act upon some tissues as irritants and in others excite degenerative changes that permit of uratic deposition. The estimate of the extent of intestinal derangement by investigations into the purins of the fæces is a promising line of research in unravelling the pathology of gout and is being very ably conducted by Dr. Walker Hall. If the view as to the intestinal origin of the toxæmia present in gout is correct the value of many mineral waters both as curative and preventive agents of gout becomes at once intelligible, owing to the marked influence that they have on the metabolism of the intestinal tract. Especially are the sulphur waters of this spa useful in removing by the bowels the antecedents of the toxin causing gout, and at the same time in exercising a stimulating effect on intestinal and hepatic metabolism.

The value of a given mineral water in the treatment of gout depends greatly on the main object with which it is taken. For instance, it may be taken to remove gouty deposits or to stimulate the action of a sluggish liver and to relieve portal congestion or for the treatment of gouty dyspepsia, or to relieve the bowels in cases of torpor and gastro-intestinal catarrh or to act on the kidneys, or to relieve gouty affections of the skin. Now it is manifest that any one mineral water is not likely to produce all these effects and it is also obviously conceivable that a mineral water which might be most useful to effect one of these purposes might prove injurious if employed to effect another. No doubt considerable error has arisen from indiscriminately sending gouty patients to a particular spa without giving due consideration to the question as to whether the water of that spa is suitable for the treatment of the specific gouty disorder from which the patient is suffering. It is especially in cases of gastro-intestinal catarrh and torpor, of gouty dyspepsia, of sluggish action of the liver, of gouty eczema, of gouty glycosuria, and of other forms of irregular gout that the Harrogate waters prove so valuable, whilst the various baths combined with massage are so useful in producing softening and absorption of the deposits in the joints and other tissues. In my opinion patients actually suffering from acute or sub-acute articular gout, or who are apparently on the verge of such an attack, are better without sulphur waters, as in such cases the waters tend to accentuate or precipitate an attack in the joints. At the present time, however, it is far commoner to meet with gout in some of its irregular forms than in the articular form and in most of the cases of irregular gout I cannot speak too highly of the beneficial effects of the Harrogate waters; especially does this apply to the form of gastro-intestinal catarrh, hepatic inadequacy, and eczema due to the gouty condition.

RHEUMATOID ARTHRITIS.

Rheumatoid arthritis is a disease which can be considerably benefited by spa treatment. It is held by some to be a

[1] THE LANCET, Jan. 31st, 1903, p. 288.

very complex disorder which has many factors concerned in its etiology. I do not hold with this view, as I consider that many forms of arthritis, especially the various forms of septic arthritis, have been classified as rheumatoid arthritis. These have no right to that name at all and should not be confused with that disease. Rheumatoid arthritis is a constitutional disease, not a local one—the affection of the joints is only a part, although an important part, of the morbid process. It is a disease due to the presence of micro-organisms which gain access to the blood, in the majority of cases probably through some chronic catarrh of the alimentary tract, although the invasion may occur from the nose, pharynx, or air tubes. After gaining access to the circulation they find a suitable nidus for their growth in the joints, where they grow and propagate in the synovial membranes, ligaments, cartilages, and bones. As a result of their presence inflammatory changes occur which result in ulceration, erosion, destruction, and, coincidently as a rule, in hypertrophy also. During the active growth of these micro-organisms toxins are produced and discharged into the circulation and by their action on the nervous system give rise to the nervous symptoms of the disease, while the toxins acting on the vaso-motor nerves and the trophic nerves of the skin produce the local sweatings and pigmentation which occur in connexion with rheumatoid arthritis.

Rheumatoid arthritis, if left untreated, tends to spread from joint to joint and produces progressive destruction of the joint tissues. Occasionally treatment fails to effect any arrest of the disease, and this is especially apt to occur in connexion with the rheumatoid arthritis of the old. For the successful treatment of this disease it is essential that the treatment should be commenced while the disease is in its early stages, hence the importance of an early recognition of the malady and of its distinction from gout and rheumatism. The treatment must be persevered with for a lengthened period of time and during the treatment everything possible must be done to increase the patient's strength and to maintain the general condition of nutrition at the highest possible level. If rheumatoid arthritis is seen and recognised early in the acute stage it is curable. In the later chronic stages it is possible to arrest the disease, to remove the pain, and to secure greater movement of the joints but it is not possible to bring the disorganised and deformed joints back to their normal state. It is remarkable, however, even in many chronic cases, what a considerable amount of improvement may be effected in the joints by prolonged treatment.

The not infrequent mistake of diagnosing rheumatoid arthritis as gout and the consequent placing of the patient on a restricted and spare diet has undoubtedly led to the development of severe and incurable forms of the disease. It is esssentially a disease that requires good and nutritious feeding, and I have seen many cases of rheumatoid arthritis which have gone thoroughly to the bad through the initial error of mistaking the disease for gout and treating it with a spare diet. The diet should be as liberal and as good as the patient can digest, and animal food should be partaken of freely, though not to the exclusion of vegetables. The exclusion of the red meats and of such articles as sugar, potatoes, cauliflower, peas and beans on the assumption that they do harm in rheumatoid arthritis is, in my opinion, not only unnecessary but is absolutely opposed to the treatment I have adopted and the careful observations I have made in the dieting of patients suffering from this disease.

Although I hold very strongly to the view that prolonged drug treatment is absolutely essential to the successful treatment of rheumatoid arthritis, yet I am convinced that a course of spa treatment from time to time is most helpful in facilitating the cure or arrest of the disease. If rheumatoid arthritis is due in the majority of cases to an infection from the alimentary tract, the advantage of flushing that tract with a natural mineral water is obvious. In addition, the thermal treatment of the affected joints by means of baths, superheated air, or electric-light baths is most beneficial. Douche massage is the most effective form of treatment with hot water, and perhaps next to that rank peat baths and brine baths. Electric-light baths, in which the affected joints are bathed in the heat and light rays reflected from a number of incandescent electric lamps, are also beneficial in many cases. Properly regulated movements and properly applied massage are of great use in overcoming the stiffening and fixation of the joints and the muscular wasting in their vicinity. Massage increases the volume of blood circulating through the joint tissues, by which their nutrition is improved. It also exercises a stimulant effect on the trophic nerves and tends to reduce any muscular spasm and to relieve pain. The absorption of recently formed adhesions is also probably promoted by massage. Massage, in addition to its local influence upon the affected joints and their proximate muscles, also improves the general circulation and the nutrition of the body. General massage should, therefore, be lightly applied at first, little or no attention being paid to massage of the affected joints for the first few days. The form of manipulation which may be applied to the joints with the best results is *massage à friction*, which consists of the application of quick frictions or rubbings to the surfaces of the joints. In addition gentle kneading and squeezing of the parts, particularly of the tendons and fibrous surroundings, should be effected. The effects of such manipulations are generally evidenced by the rapid absorption of exudative products in and around the joints. Active and passive movements of the affected joints should also be employed.

CHRONIC "RHEUMATIC" AFFECTIONS.

I now wish briefly to consider a class of cases which I think we shall all admit constitute the bulk of the cases met with at the majority of spas and concerning which many erroneous ideas and opinions prevail. I refer to the more or less chronic affections which are generally labelled "rheumatic," but which undoubtedly are not the sequelæ of acute rheumatism and which are in no sense connected with that disease. By acute rheumatism I take it that we all mean an infective disease affecting the system generally and in which joints, heart, pleura, skin, subcutaneous tissues, nervous system, and other structures of the body may all be implicated. This infective rheumatic condition may linger on for many months and years, as is shown by the recurrences of outbursts during periods of imperfect recovery, by successive crops of subcutaneous rheumatic nodules, and by the development of rheumatic pleurisy. Chronic joint affections may also be left as sequelæ of acute or subacute rheumatism. In such cases the joints are painful, stiff, and frequently distorted. The distortions, however, are not due to bony or cartilaginous changes such as occur in rheumatoid arthritis, but are dependent upon alterations in the ligaments, tendons, and muscles. Such cases may certainly and correctly be called true "chronic rheumatism." It is not, however, to these cases that I am now referring but to those cases so commonly met with in practice which are called "rheumatic," but which are not connected at all with what we know as true rheumatism and to which Stockman has recently drawn attention in a very valuable paper.

In the great majority of the cases of so-called chronic rheumatism to which I am now referring the essential pathological change is an inflammatory hyperplasia of the white fibrous tissue in various parts of the body, to which the term "fibrositis" has been very aptly applied. The articular structures proper—synovial membrane, cartilage and bone—are not primarily affected, but the parts implicated are the fibrous tissues of the joints, muscles, and bones, especially the aponeuroses and insertions of the muscles, fasciæ, the fibrous ligaments of the joints, and the periosteum. Such affections cause pain and stiffness in these structures, are especially apt to recur, and are commonly referred to as rheumatic or even gouty in their origin. This inflammatory hyperplasia of the fibrous tissues occurs in patches and is started by exposure to wet or cold, by injury, or by some irritant, microbic or toxic, conveyed in the blood. The inflamed and swollen fibrous tissue is tender, painful on pressure or on movement, and can frequently be felt on palpation, or is evident by the consequent elevation of the skin. This fibrositis may completely disappear, but recurrences are common, and if not suitably treated the thickened fibrous tissue remains as indurations at various parts.

The indurations may be widespread but generally are well defined and vary in size from an eighth of an inch to one inch in diameter. They may be situated in the subcutaneous tissue, the muscles, tendons, aponeuroses, and periosteum. The pain is especially aggravated by any sudden movement of the muscles which compresses or stretches the affected fibrous tissues and the sensory nerve filaments. The muscle spindles, which lie between the bundles of muscular fibres and in the fibrous tissue of the muscle, and each one of which receives one or more narrow muscular fibres and two or more nerve fibres, are the only sensory structures in muscle, and it is through them that the pain of so-called

muscular rheumatism is felt. Owing to the direct pressure of a fibrous nodule on a nerve, or to the involvement of the nerve in the nodule, the pain may be felt over an extensive area, or even be referred to a part of the body which is not the seat of the fibrositis.

Local fibrositis may result from several causes of which the following are the commonest:—

1. *Cold, damp, and wet.*—In a very large number of cases the only assignable cause of the fibrositis is a history of exposure to cold and wet. Sometimes the attack comes on acutely a few hours after the exposure, as in many cases of lumbago, stiff neck, intercostal "rheumatism," and other forms of so-called muscular "rheumatism." At other times stiffness gradually develops after the exposure and passes on to the condition of chronic fibrositis generally known as chronic rheumatism. The exposure may be due to draughts, remaining in wet clothes, lying or sitting on damp ground or some cold substance, or the simple advent of damp or cold weather. Many persons are readily affected by the approach of rain and by a lowering of the barometric pressure. Longstreth states that the painful symptoms do not correspond to rain but to the fall of barometric pressure, and Stockman suggests that possibly the atmospheric changes may increase or lessen the lymph pressure in the body, and so increase or lessen the tension in the affected fibrous tissues. A very common cause of lumbago from exposure to a local draught is sitting on a draughty privy or water-closet.

Lumbago may be an affection of the fibrous elements of the lumbar muscles, but more commonly it starts as a localised affection of the insertions of the muscles in the vicinity of one or both of the sacro-iliac joints. It spreads by continuity of the fibrous tissue, as is manifested by its affecting the tendinous attachments of the neighbouring muscles, by its affecting the sacro-iliac joint itself, and by its often spreading through the joint and reaching the sheath of the sciatic nerve. This explains the very frequent association of some degree of sciatica with an attack of lumbago. It is astonishing to find in a very large number of cases of lumbago that a careful examination of the back reveals no pain or tenderness on pressure over the various muscles, but that as soon as one or both sacro-iliac joints are pressed upon acute pain is complained of and the patient refers his appreciation of the pain to that region. I am convinced that in the majority of cases of lumbago the affection is not in the quadratus lumborum, nor even in the deeper muscles of the back, but is in the fibrous tissues directly over the sacro-iliac joint and in the joint itself. The production of the pain of lumbago is usually sudden, the patient frequently ascribing it to a sudden strain or wrick, especially on rising in the morning, but although the production of the pain is generally sudden, yet the condition on which it depends has been gradually developed.

2. *Extremes of heat and cold.*—Sudden and considerable variations in temperature constitute by no means an uncommon cause of a generalised fibrositis which takes the form of so-called "muscular rheumatism," following on the resulting chill.

3. *Local injuries.*—These are responsible for a large number of cases of local fibrositis, so-called "local rheumatism." The injury is generally caused by over-muscular exertion, such as the strain of lifting a heavy weight, the strain exerted in certain muscles in order to save a sudden fall, and the excessive muscular strain that an athlete may put forth. Golf produces a number of such injuries, the fibrous tissues of the muscles and their attachments of the arms and back being specially affected in this game. If the individual has previously suffered from fibrositis which has not been completely cured, or which has left some fibrous nodules, a comparatively slight wrench may be sufficient to start the aching in the affected part.

4. *Absorption of irritating toxins from the gastro-intestinal tract.*—It has long been recognised that disorders of the stomach or bowels may give rise to "rheumatic" pains. The aching in the joints and the lumbar region that occasionally occurs the day after a lengthy dinner, especially if several wines have been indulged in, is due to irritaton of the fibrous tissues by the toxins absorbed from the intestinal tract, and which have been produced there by abnormal fermentation. This pain, whether in the joints or the lumbar region, which follows excessive indulgence at the table, is generally attributed to gout, and, as a rule, the champagne, claret, or port is blamed for it. I am convinced, however, that this articular or muscular pain has, in the great majority of cases, no relation whatever to gout, and that it is simply an indication of an inability of the gastro-intestinal tract to deal properly with the various articles introduced into it.

It is in many of these cases of fibrositis that the general treatment at a spa is so useful. Many forms of hot baths, vapour baths, brine baths, peat baths, electric light and superheated air treatment are there obtainable, and the patient is enabled to give ample time to the massage, electrical and other forms of treatment. In very acute cases rest of the affected part may be necessary but this is not incompatible with baths and properly regulated massage. Local massage is of the greatest use in most cases of fibrositis, provided the very acute stage has passed. The manipulations should be very gentle at first, so as to promote removal of exudation and to relieve the tension. Afterwards more vigorous massage is most efficacious in dispersing the indurations and fibrous thickenings and in removing the stiffness of the affected part.

Unlike gout, no special dieting is required in these affections. Moderation should be the keynote of all prone to the various forms of fibrositis, and especially should they avoid foods which their experience has taught them to be likely to produce gastro-intestinal fermentation. I am, however, absolutely opposed to the indiscriminate prohibition of such articles as red meats, sugar, jams, bread, fruit, &c., in the cases of sufferers from the various forms of fibrositis. All these articles of food, if they do not produce indigestion, are perfectly wholesome. It has become of late years a fashionable craze to attribute many of these forms of "chronic rheumatism" to uric acid. Most emphatically do I declare that it has neither part nor parcel in the production of any of these forms of fibrositis. I believe that uric acid possesses no toxic properties whatever, and I take this opportunity of most earnestly raising my voice against the absurd modern fetichism of this nitrogenous bye-product, and of protesting against the shameful exploitation of it as a dangerous poison which too frequently disgraces the advertisement columns of our daily, weekly, and monthly papers.

An Address

ENTITLED

ARE THE PROBLEMS OF CANCER INSOLUBLE?

Delivered before the Brighton and Sussex Medico-Chirurgical Society on Dec. 7th, 1905,

BY E. F. BASHFORD, M.D. EDIN.,

GENERAL SUPERINTENDENT OF RESEARCH, AND DIRECTOR OF THE LABORATORY, IMPERIAL CANCER RESEARCH FUND.

GENTLEMEN,—Referring to du Bois-Reymond's discussion of the limits to physiological inquiry, Mach, in his "Analysis of the Sensations," points out that those problems which are insoluble from their very nature should be outside the domain of scientific thought. He suggests that their insoluble nature depends on the form in which they are stated—depends, in short, on an erroneous formulation. Rational thought must devise a re-statement of such problems in a way that makes their investigation profitable. More than other problems of medicine, the problems of cancer present a varying facies, according to the number, the variety, and the nature of the facts which we take into our purview in attempting to formulate them, and the conflicting standpoints of different investigators are the natural result. Experience and discussion have, however, already provided for the proper formulation and solution of some of those problems; but the history of the investigation of cancer presents many instances of problems still baffling solution because, as I believe, having been originally formulated on insufficient data, they have been wrongly formulated. Nevertheless their direct solution continues to be freshly attempted.

I propose to indicate my present conceptions of some of the problems of malignant new growths and the means by which their solution is being attempted. I shall re-state

some of the problems which have long baffled solution in a form which makes their investigation profitable and their solution more hopeful. I shall express my opinions on the progress made towards the attainment of these ends as definitely as possible, and in reply to any criticism that I am not dogmatic enough I shall contend that the investigation of cancer has suffered, and suffers to-day, from a too great readiness to hold dogmatic opinions on a subject of which we know so little and regarding which hitherto unsuspected facts have accumulated in recent years and are still accumulating.

Some three years ago the investigations of the Imperial Cancer Research Fund commenced. Those actively engaged in the task essayed to grapple with the disease, not as a problem of human pathology only, but as a comparative biological problem, and one requiring experimental treatment. Dr. J. A. Murray and myself have striven to place the exact knowledge of the nature and the incidence of the disease on a basis commensurate with its ramifications in men and animals. For, on the one hand, those facts which were matters of common knowledge to the medical profession were drawn from an extremely narrow field of investigation—viz., the study of the disease in man; and, on the contrary, the hypotheses explaining them ranged over the full field of biological knowledge and speculation. To preserve an attitude sufficiently free from bias was no easy matter, because all coördinated investigation must be conceived in terms of a working hypothesis of some sort.

Older Hypothetical Explanations of the Nature and Growth of Cancer.

At that time various hypotheses were prominently before the medical profession—three especially contested for favour. In the Cohnheim hypothesis and its variants an embryonic origin was postulated, and to the minds of many the only alternative to an awakening of latent powers of growth in "embryonic rests" was the acquisition of new powers of growth by adult differentiated tissue. What was the amount of growth requiring explanation? It was the amount which sufficed to cause a patient to succumb to cancer and the explanations were formulated accordingly. The energy with which growth proceeds showed no diminution up to the time of death and was loosely described as "limitless." How was this amount of growth to be elicited in either embryonic or adult tissue? Various forms of stimulus—e.g., chronic irritation—were suggested. These suggestions were held to be an unsatisfactory answer to a question which the third hypothesis attempted to dispose of by assuming the intervention of a parasite to elicit the necessary power of growth.

The supporters of the two hypotheses first mentioned were not very active, partly owing to the absence of new facts to argue from and partly from the necessity for testing the fresh evidence brought forward in support of the parasitic hypothesis. The view that cancer was an infective disease directly transmissible from individual to individual was in favour in France and also in Germany, where the statistical results of a census of all the cases of cancer recorded on a definite day throughout the German empire had been adduced in its support for the first time. At home, on the Continent, and in America most of the serious investigations were being directed to proving or disproving this hypothesis, although some suggestive work was being done bearing on the possible embryonic nature of tumours.

In regard to the hypothesis of infection, discussion chiefly centred around the interpretation of the increase recorded in the number of deaths from cancer, the apparent endemic occurrence of the disease, and the nature of certain bodies—the alleged parasites—frequently found in cancer cells, the best defined being those described by Plimmer in cancer of the breast. With the exception of the work done by Shattock and Ballance and some doubtful observations by Hanau, Moreau, and L. Löeb, only haphazard efforts[1] to prove or disprove the possibility of transmitting cancer experimentally had been made and the results were contradictory and wholly unsatisfactory. Anyone tackling the problem and seeking an explanation of the frequency of cancer found himself obliged to sift the evidence for and against the view that cancer was directly communicable by infection. More recently, indeed just a year ago, a distinguished surgeon anathematised the bedclothing and the discharges of cancer patients as dangerous sources of infection.

The causative influence of geological formation, of soil, of climate and diet, of dwelling near rivers and trees, all found advocates. Civilisation even was blamed for calling cancer into being; the negro in his native Africa was said to be free from cancer; the negro of America was known to be prone to it. The veterinary profession had shown that all the forms of cancer occurred in domesticated mammals; but medical men alleged, or were unable to disprove, that this was due to contact with man. Wild animals were said to be free from it. The evidence for its occurrence outside the mammals was regarded with the greatest distrust. Doubts were even expressed as to the identity of the disease in man and animals, although in 1899 Professor (now Sir) J. McFadyean had protested against the assertion of a distinguished member of the medical profession that cancer was a disease peculiar to man.

The Investigation of Cancer still in a State of Confusion and Error.

The confusion of opinions and conflicting statements of fact were disconcerting in the extreme to the mere medical man seeking guidance. The chaotic state of the whole matter was emphasised by the absence of any criteria serving as guide-posts in the wilderness of fact and fiction. Obviously where so much divergence of opinion was possible many of the matters under discussion were open to ambiguity of interpretation or insufficiently supported by accurate observation. Investigation was hampered by the need for paying heed to a mass of disorderly details without any more obvious relation to one another than could be found for them in the imaginations of a multitude of authors wildly guessing at truth and formulating the problem they sought to solve in terms fitted less to the facts than to the solutions advanced. Truly there was, and is, need for work, much work and accurate observation, to cope with the flood of speculation and to elevate the investigation of cancer from the kind of "Tom Tiddler's" domain it had become and unfortunately still remains. From the outline I have given it will be evident to you that we had to attempt to solve not one but many problems associated with cancer.

Organised Attempt to Systematise Investigation.

Those responsible for the institution of what is now the Imperial Cancer Research Fund foresaw that only a very far-reaching scheme of inquiry, backed by the most disinterested supervision possible—that of the Royal Colleges of Physicians and Surgeons—would suffice to clear the ground. With the approval of the executive committee I determined to pursue five preliminary lines of inquiry covering most of the points at issue discussed above and affording means for submitting cancer to experimental study. In the first place it seemed essential: (1) to define the extent to which cancer occurred throughout the civilised and uncivilised races of man; (2) to determine the extent to which it pervaded the animal kingdom outside of the domesticated animals; (3) to ascertain whether the disease were transferable; (4) to demonstrate that any experimental observations made were made with cancer in all ways comparable to that found in man and to show the advantage of undertaking the study of specific problems in the animals best suited to their investigation;[2] and (5) the important deductions derived from statistics and their conflicting nature, together with the need for their valuable aid in furthering the zoological and biological lines of investigation, made it imperative to inquire into the uses to which statistics could be properly put and to ascertain the reliability of the clinical and pathological data on which they must be based. In this connexion the higher incidence of cancer in old age required special attention as a comparative biological problem; its statistical importance had long been recognised by accurate statisticians and most fully emphasised by Newsholme.

These preliminary lines of inquiry being objective in nature they permitted of investigation fairly free from bias. In their early stages they bore less on the nature of the disease and more on the value of existing knowledge and the elucidation of the relation of known facts to one another. I shall not weary you with details of

[1] Jensen's and Borrel's investigations had not then been published.

[2] E.g., for the study of minute cell structures the amphibia have long been classical objects. The study of the cell of malignant new growths in the amphibia has been of the greatest value to us. The same group, owing to the power of regeneration, amounting even to the regeneration of entire limbs in some species, affords opportunities for studying the alleged analogy between the growth of cancer and the growth of tissues in reparative processes to replace defects. Up to the present, however, malignant new growths have only been successfully propagated in the mouse which has been found to be well suited for the experimental study of many features of cancer.

the organisation[3] necessary for the conduct of those five lines of preliminary inquiry in such a way that they formed parts of one coördinated investigation, the results of which will, I hope, show you that during the past three years many contradictions have been resolved, fallacies have been exposed, new facts have been elicited, the experimental method of investigating cancer has been placed on a sure and comparative basis, and the whole field of inquiry narrowed.

ETHNOLOGICAL AND ZOOLOGICAL DISTRIBUTION.

The energy of medical and other Colonial officials speedily led to the discovery of cases of cancer in native races of mankind hitherto supposed to be exempt, dwelling in parts of the world remote from European civilisation. Where, in the first instance, the disease was not found cases have since been brought to notice. The inhabitants of Japan and China suffer from cancer, and upwards of 1000 cases have now been reported from the numerous native castes coming under the observation of European medical officers in India. The Danish Government informed us of its occurrence in the Arctic regions. The hearty response of the veterinary profession to the appeals addressed to them brought a surprising amount of material from domesticated mammals and some from wild animals in captivity. One of our earliest cases was a carcinoma mammæ in a wild mouse. Malignant new growths were obtained from birds (tame and wild), some from fish—e.g., from trout in hatcheries and from carp, also from marine fish living in a state of nature. Independently of us, Dr. Pick of Berlin described cases of malignant new growths in a fowl, a giant salamander, and in trout, the last having been originally recorded by Miss Plehn. A large tumour in an oyster, described as long ago as 1887, has been brought to our notice, and efforts are being made to find out its true nature.

The information on all the above lines continues to accumulate and the search has been taken up in widely separated parts of the world. A few weeks ago Sir William McGregor forwarded a specimen of what is probably a malignant new growth in a codfish caught off Newfoundland, and Dr. Smallwood of Syracuse, U.S.A., sent us specimens of a new growth in a frog which we find is a columnar-cell carcinoma infiltrating the kidney. Recently Professor Welsh of Sydney, New South Wales, has also noted the occurrence of cancer in an aged lioness, an old tigress, and in a marsupial; likewise another growth in a frog. Dr. Pick continues to augment our knowledge of malignant new growths in fish. His account of a painstaking investigation of carcinoma in trout aroused great attention last month at the Berlin Medical Society. Many of Dr. Pick's hearers went to the meeting still doubting the existence of such things. It soon became probable that all races of mankind were liable to cancer and likewise all vertebrate animals,[4] whether living in captivity or in a state of nature. To this general statement there is still one exception which we have pointed out before: a true malignant new growth has not yet been described in a reptile, but evidence was bound to be late in coming in the case of some groups, and there is no obvious reason why reptiles and invertebrates should not also suffer from cancer. There are, of course, difficulties in obtaining trustworthy data on its relative frequency either in native races of man or in animals.

IDENTITY OF CANCER IN MEN AND ANIMALS.

I illustrate some of the facts alluded to by slides showing carcinoma mammæ, malignant adenoma of the mammæ, squamous-celled carcinoma of the jaw, adeno-carcinoma of the small intestine, &c., in the mouse (tame and wild); carcinoma and malignant adenoma in salamander and in frog, also in the trout, codfish, gurnard, and some examples of sarcomata; from which you will see that the histological lesions characteristic of the disease throughout the vertebrates are identical with those characteristic of the disease in man.[5]

CONSTANT ASSOCIATION WITH OLD AGE IN MEN AND ANIMALS.

I must, however, also tell you that cancer has the further remarkable common feature that in animals it has the same higher incidence in old age and therefore the same relation to the duration of life as in man, which involves that in animals with a shorter life tenure, the period of relative immunity is correspondingly shortened. Within the limited compass of the life of a mouse (three years) there are condensed the vital activities which in man may occupy more than half a century and all series of events are correspondingly shortened. The association of cancer with old age is the only factor known to be constantly associated and intimately bound up with the processes responsible for the development of cancer in man and animals.

LIMITATIONS TO TRANSMISSION AND ITS UNIQUE FEATURES.

With apparent identity in the nature of a disease of such universal occurrence we were face to face with a new aspect of the old problem, Was it transmissible? Did an infective agent entering the body from without link together the sporadic cases so widely distributed in the animal scale from civilised man to marine fish living in a state of nature? The surmise was quickly arrived at that external factors such as habitat, food, and conditions of life generally played little, if any, direct part in causing a disease showing constant and unique characters in organisms so divergent. The influence of such inconstant external agencies is probably a mediate one as contrasted with the direct and constant association of cancer with old age. The essential factor or factors appear to be properties common to the cells of all the divergent organisms prone to the disease and therefore the time of its appearance merely obeys the laws which set different limits to the compass of life. This conclusion would have been, perhaps, premature if drawn from the evidence of ethnological and zoological distribution alone. Concomitantly, however, the results of some of the other preliminary lines of inquiry showed that civilised man's responsibility for the occurrence of cancer in native races and domesticated animals was in all probability limited to providing them with an opportunity for reaching the "cancer ages." To the newly ascertained wide occurrence of the disease were also added: (1) the knowledge of the still more astonishing limitations to its transmission; and (2) the discovery that cancer possessed powers of continued growth after the death of the original host unparalleled either by organisms or tissues in the vertebrate kingdom. We have attempted the experimental transmission of the disease on a most extensive scale. In mice alone we have performed upwards of 10,000 experiments. We have obtained incontrovertible evidence that the disease is only readily transmissible from one individual to another of the same species or even of the same race. But to this restriction under favourable experimental conditions there are added yet others, so that its transmission naturally from one individual to another is a very improbable contingency; a conclusion supported by the negative results of numerous experiments in which animals suffering from cancer have been housed with healthy animals.

I show you a series of slides illustrating the sequence of events when cancer is successfully inoculated from one animal to another. You will observe how a few parenchyma cells retain their vitality and continue to divide and multiply, giving rise to large tumours at the site of inoculation. On the contrary you will notice the rapid degeneration of the supporting tissues and blood vessels forming the stroma. They have not the vital powers of the cancer cells; they die and are supplied afresh, each time a piece of tumour continues to grow after being transferred to a fresh host. Nevertheless the new stroma assumes the distinctive features of the original stroma of sporadic tumours differing among themselves. The new tumours are therefore exactly like the original ones. Extensive metastases may form in the lungs and you will observe that the growth of such transplanted tumours is either expansive or infiltrative, according to the site in which they are growing. Cancer thus artificially growing has all the properties of cancer as it occurs sporadically, even to the difficulty of discovering any specific symptoms of its presence. This identity is well illustrated by the behaviour of two growths in the walls of the small intestine. The appearances and mode of spread, from the mucous membrane towards the peritoneal surface, in the sporadic growth are duplicated in

---

[3] We have elsewhere acknowledged our indebtedness to Government departments, London hospitals, medical and other officials of the Colonies and India, and to many collaborators at home and abroad, to Borrel, Jensen, Miss Plehn, and Pick especially who have worked independently on single lines of inquiry, similar to, or identical with, some of those mentioned above.

[4] In this connexion we do not rely on sarcomata alone, which in animals may be closely simulated by other little known processes.

[5] We have refrained from detailed pathologico-anatomical description of tumours in lower animals because to have done so would have been to forsake the main purpose of our investigations and Dr. Pick had taken up the subject in a most able manner. Where the tumours have been the starting-point for experiments their pathological features have been carefully studied and described.

the invasion of the small intestine from the peritoneal surface by a growth following an intraperitoneal inoculation. The metastases in the lungs and the infiltration of the liver, kidneys, and diaphragm yield all the evidence necessary to make the demonstration complete.

Propagation succeeds as well in young animals as in old—perhaps better. Thus, although old age is constantly associated with the origin of cancer it is not a necessary condition for the growth to continue when once it has started. Growth occurs in a large percentage of all the animals of the race used, and by re-inoculating those in which failure takes place in the first instance tumours can subsequently be obtained. Within one race there is little, if any, evidence of idiosyncrasy or varying suitability of the soil, as it were, and experiments show that success and failure are determined almost, if not entirely, by factors within the tumour cells themselves.

The facts I have been relating refer to the mouse, the only animal in which carcinoma has been successfully propagated. A mouse cancer will only grow in other mice, that of a tame mouse only well in other tame mice of the same race, and that of a wild mouse only in another wild mouse of the same race. The cancer of a tame or wild Danish, German, or French mouse grows with difficulty, or not at all, in the corresponding race of English mice. It has been absolutely impossible to get cells from a mouse tumour to grow in any other species of animal. The outstanding features in the artificial transmission of cancer are therefore: (1) the great difficulty of transmission as contrasted with that of the known infective diseases; (2) the continued vitality of the cancer cells as opposed to the death of the stroma cells and renewal of the stroma by the reaction set up in the tissues of the host at each re-inoculation; (3) the cells descended from any one sporadic tumour, although apparently undifferentiated (embryonic), retain constant properties determining the specific nature of the stroma freshly supplied at each inoculation; (4) the importance of unsuspected subtle differences in different races of mice sufficient to determine success or failure and, *per contra*, the unimportance of changes associated with age and other natural processes in the life cycle of the individuals of any one race when once cancerous growth has started; and (5) the contrasts established between the transmission of cancer and all known processes of infection.

The contrast between the transmission of infection and the propagation of cancer is worthy of the serious attention of all those brought into contact with patients suffering from the disease or engaged in its investigation. The degeneration of the stroma of cancer on inoculation from one animal to another illustrates also what happens to the tissues of a tuberculous nodule if they be used to transmit tuberculosis to another animal; they degenerate but they hand on the tubercle bacillus to the tissues of the new host and these becoming infected, themselves exhibit the peculiarities of the disease. The experimental transmission of cancer means the continued growth of the tumour cells of one animal in a succession of other animals. The tissues of the new hosts do not acquire any cancerous properties; they merely react to the presence of the cancer cells and supply them with nourishment. The process is fundamentally different and distinguishable from all known processes of infection. The transference of cancer cells from one mouse to another, therefore, affords them an opportunity for continuing to grow in a succession of animals. Jensen's tumour is growing to-day with undiminished energy four years after the death of the mouse in which it arose and therefore for a period of one year longer than a mouse lives. In our own experiments growth has proceeded in some 3000 mice successively, all of which are now dead, yet the tumour cells themselves are multiplying in other mice as actively as ever and producing enormous masses of tissue. The power of proliferation in this and four other tumours stands in no relation to the normal length of life, nor to the limits set to the growth of a mouse. In describing the artificial propagation of cancer Dr. Murray and I have pointed out that it is a phenomenon unparalleled in the vertebrates and is a truer measure of the nature of the growth than that formerly known, which terminated in the death of a patient and itself ceased at that death. The experimental study of "expansive" and "infiltrative" growth shows that there is no essential difference between them. What is understood by the "malignancy" of a tumour is but a manifestation of the power of growth: a conclusion to which Ehrlich and Apolant have recently given confirmation.

General Conclusions from the Ethnological and Zoological Distribution, the Age Incidence, the Nature and the Limitations to the Transmission of Cancer.

Such is the difficulty of transmitting cancer from the tame mice of one country—e.g., France or Germany—to the tame mice of England and the all but absolute impossibility of transmission from tame mice to wild mice that I venture to assert that the prevalence of cancer among the negroes of America was not brought about by contact with cancer-infested white men. Cancer was inherent in the negroes when they were shipped from their native Africa, where it probably existed, as it still does to-day in natives remote from civilisation. Nor has the white man been the focus from which the disease has spread throughout the vertebrate kingdom. The study of the limitations to the transmission of cancer shows that cancerous tissue possesses properties more specific to, and distinctive of, a species than any of the criteria by which the zoologist separates one species from another or than the differences which the "precipitin test" has revealed between the blood of even nearly allied animals. Sporadically the disease arises *de novo* in each organism attacked and appears to be a process to which the tissues of the most divergent organisms are liable in the old age period of life. The only alternative is to postulate that each species, race, and even tissue, has got its cancer, or rather cancers, which are handed on from generation to generation like some family heirloom. This assumes that cancers are themselves organisms implanted from individual to individual; that they are specific to the species, or even race, whose vitality they sap, and directly descended from some primeval cancer which started in remote geological ages. The supposition is entirely irrational and is disproved by the fact that cancer is constantly a disease of old age, whereas old age is not necessary for the transmission and growth of cancer; there is therefore no reason why cancer, transmitted as supposed, should not prefer youthful animals, instead of being increasingly frequent as age advances. This *reductio ad absurdum* is but one demonstration of the value of the comparative and experimental method of studying cancer.

In the light of the knowledge we now possess many of the problems that faced us three years ago have been solved and many of the confusing statements to which I have drawn attention cease to be worthy of serious consideration. The occurrence of cancer in codfish off the Banks of Newfoundland may not show that icebergs and fogs cause cancer, but it does show that dwelling in the neighbourhood of trees, or on a clay soil, living under the influence of civilisation or indulgence in alcohol, are not indispensable to the appearance of cancer. Time prevents me adding many facts to those I have laid before you. I can only allude to the valuable aid the statistical investigations have been to the others and state that the minute study of the prolonged artificial propagation of cancer shows that the energy and the amount of proliferation fluctuate from causes inherent in the cells themselves. This study led us to discard, as being incompatible with the facts, the working hypothesis that growth might be maintained by the intercalation of heterotypical mitoses (like those of reproductive tissue), followed by nuclear fusion. In our investigations we have obtained evidence against all the explanations yet advanced as to the cause and nature of cancer, proof that cancer cells have not reverted to an embryonic undifferentiated state, or that the growth and ceaseless cell division of cancer resemble the intermittent growth and cell division of reproductive tissue, or that the artificial propagation of cancer resembles the grafting practised by horticulturists in the propagation of plants and trees. Thus at present any attempts directly to ascertain the cause and nature of cancer are surrounded by so many sources of fallacy that to my mind they remain to-day as unprofitable as they have been in the past. The attempt to *produce* cancer experimentally—e.g., by chronic irritation—for what form of chronic irritation is constant throughout the vertebrate scale?—is also surrounded with great difficulty, not the least part of which is the liability apparently inherent in all animals to acquire cancer in old age.

The constant association of cancer with old age suggests a direct attempt to ascertain the nature of the connexion. But such a direct attack is unprofitable because it at once opens up the bigger problem, What constitutes senility itself? This is a problem at present beyond our powers. There has long been indirect evidence that the connexion between

senescence and cancer was local and not constitutional. Otherwise multiple primary growths would be the rule and not the exception. Our own observations show that the influence of age is active in relation to the origin of cancerous growth and not in relation to its continuation; for cancer can be propagated almost better in young than in old animals. If it be permissible to formulate the association of cancer with old age in other terms, one may say that tissues which become cancerous alone escape the consequences of the senescence to which organisms as a whole succumb, or, that if cancerous tissues are also prone to succumb to senescence, they are able to recover from it. Stated in either way the association of the origin of cancer with old age becomes a problem to be attacked after those formulated below with reference to the continued growth of cancer have been solved.

The artificial propagation of cancer tells us nothing directly as to the origin of cancer; it only indicates that the distinctive characters of any single malignant new growth, once acquired, are probably permanent, for under artificial propagation different carcinomata of one organ (the mamma) retain their individual characteristics. They are not convertible into one another nor do they merge into a common type. Artificial propagation gives the opportunity of studying many of the properties of malignant new growths in detail with a thoroughness unattainable in the case of sporadic tumours. It has already proved the inadequacy of the standards by which an anthropocentric pathology has attempted to measure the proliferation and to probe the nature of cancer. The true measure of that proliferation has not yet been arrived at. Its study suggests what appears at first sight to be a series of new problems, but may really be restatements of old ones—viz., Why is the amount of the growth of cancer relatively greater than that of any vetebrate organism? Are growth and cell division always progressive? Is cancer subject to a process of natural decay, or if not, how is its energy of growth and assimilation maintained? To all these questions it should be possible to obtain a definite answer with the means at our disposal, and once they have been answered the original problem, so long the object of futile direct attack, will present itself in another form more approachable than the old problem, "What is the cause of cancer?" has proved to be.

COMPETITIVE RESEARCH AND COÖRDINATED INVESTIGATION.

In conclusion, I feel it to be my duty to call attention to the risks attending the state of transition through which the investigation of cancer is passing at present. On the one hand, a change has come over the status of the actual investigators. A few years ago the investigation of cancer attracted *voluntary* workers only and almost, if not entirely, from the medical profession. To-day we have an increasing number of laboratories springing up all over the country and they are, or will be, provided with staffs *obliged* to investigate cancer and to devote their whole time to this duty. I have seen the phrase "in these days of competitive research" used in a newspaper article on the efforts being made to explain cancer. I think the phrase is unfortunate. It shows the existence of the wrong spirit among those engaged in cancer research, of a desire to make a show, to get out some results, to claim progress when none is being made; in short, it is a phrase coined to fit the spirit of scamped work and hasty conclusions, and it may even be a symptom of a tendency to exploit cancer research for other purposes. I should like to see it possible to substitute the phrase "in these days of coördinated research"; but at the same time contributions to the discussion of cancer banished from lay journals. At the very least, those actually engaged in research should not encourage such contributions.

It will be obvious to you that in so far as the work of the Imperial Cancer Research Fund has been productive of progress, that progress cannot be placed solely to the credit of Dr. Murray, Dr. Cramer, and myself—i.e., to the credit of investigators enjoying the facilities accorded to the Royal Colleges for the pursuit of these investigations. In every direction we have simply gleaned the results of a multitude of willing collaborators at home and abroad without whose aid investigations on the necessary scale would have been impossible. We have had the additional advantage of expert advice from members of subcommittees and have never hesitated to seek further advice at the best sources, both at home and abroad, on matters of importance. It is my firm conviction that it behoves those placing themselves under obligation to devote their whole time to the study of cancer to beware of being impatient of obtaining results and that those who supervise or subsidise the investigators must not be in a hurry to see a quick return for the money spent.

On the other hand, a change has come over the methods of investigation and the training and the kind of experience required of the workers themselves. Purely pathological studies are being departed from for experimental and for other methods, requiring the specialist's knowledge of statistics, general biology, chemistry, and physical chemistry to a degree not required of the mere medical man. The posts which would formerly have been filled by pathologists, bacteriologists, and others skilled in the procedures of experimental medicine, are better held by investigators trained in other sciences, but for that reason lacking the attitude of restraint imposed on every member of the medical profession by contact with human suffering. The very reasons leading us to welcome the assistance of other specialists are also reasons for caution, lest too great significance be attached to observations viewed solely in the light of their apparent analogy with normal processes familiar, e.g., to the chemist, the zoologist, or the botanist. Having myself fallen into such an error in formulating a working hypothesis, I trust I may be permitted to voice the necessity for caution.

Workers skilled in the methods of various sciences must learn to appraise the relative value of their respective standpoints and not hastily conclude that one branch of science has succeeded where another has ignominiously failed. They must control their individual observations by considering them from every standpoint—only so can the rational study of cancer proceed. The facts and the methods of pure pathological anatomy cannot be ignored; they may be too rashly held to be bankrupt. They constitute the sure and the laboriously laid foundations on which the investigators of the present day are striving to build. The pathologist, the experimentalist, the botanist, the zoologist, the chemist, and those engaged in the application of radioactive agents to the treatment of cancer will be ultimately obliged to bow to the requirements of pathological anatomy. Hence, during this transition stage in the investigation of cancer the representatives of different sciences will do well to take a modest view of their respective capacities and, above all, they must not indulge in "competitive research" but sacrifice themselves to "coördinated investigation," otherwise the investigation of cancer will merely lapse from one state of confusion and error into another.

ON THE

GENERAL PRINCIPLES OF THE THERAPEUTIC INOCULATION OF BACTERIAL VACCINES AS APPLIED TO THE TREATMENT OF TUBERCULOUS INFECTION.

BY A. E. WRIGHT, M.D. DUB.,

SOMETIME PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL, NETLEY; PATHOLOGIST TO ST. MARY'S HOSPITAL, LONDON, W.

(*Concluded from p. 1603.*)

APPENDIX TO PART I.

CASES ILLUSTRATING THE RESULTS WHICH HAVE BEEN OBTAINED IN THE TREATMENT OF STRICTLY LOCALISED TUBERCULAR INFECTION BY THE AID OF THERAPEUTIC INOCULATIONS OF A TUBERCLE VACCINE.

THE cases to which reference was made above under the headings of tubercular ulceration of the subcutaneous tissues and bone, tubercular invasion of the lymphatic glands, and tubercular disease of the genito-urinary system, may conveniently be placed upon record here.

Tubercular Ulceration of the Subcutaneous Tissues and Bone.

CASE 1.—The patient, whose case I have already reported upon,[1] is a man of about 30 years of age. His history is as follows. In the autumn of 1902 he developed tubercular glands on the left side of the neck and a tubercular abscess on the point of the left shoulder of the same side. He was

[1] Proceedings of the Royal Society, vol. lxxiv., July, 1904; THE LANCET, Oct. 22nd, 1904, p. 1158; and the Clinical Journal, Nov. 9th, 1904.

admitted to St. Mary's Hospital and was operated upon for the first time in January, 1903. The wound becoming invaded with tubercle and refusing to heal, further operative procedures were undertaken. In all six successive scraping, extirpating, and skin-grafting operations were undertaken during the course of the year, the wound becoming in each case reinfected, and the area of ulceration being extended. In December, 1903, when the patient came up for treatment by inoculation, the whole area from the point of the shoulder to the base of the ear formed a single deep eroded ulcer. The lobule of the ear was half eaten away and immediately underneath it a deep ulcerated crater had developed which looked as if it was going to break into the œsophagus. The left side of the face was distorted by swelling, giving the patient the appearance which would go along with a one-sided attack of mumps. The axilla was occupied by a gland which was as large as a pigeon's egg and the patient was haggard and very emaciated. After eight months' inoculation with new tuberculin, supplemented on several occasions by inoculations of a staphylococcus vaccine, I was able to report that steady improvement had been made under the treatment, that the swelling of the face had almost entirely disappeared, that the crater under the angle of the jaw had healed up from the bottom, that the gland in the axilla could no longer be felt, that the ulcerated wound had almost entirely closed over, and that the patient might now almost pass muster as a healthy man. After a farther three months I reported that the wound was entirely closed and that there remained only an area of the size of a threepenny-piece which was still covered by scab. I also pointed out that the previous site of the ulcer was covered in, not by scar tissue, but by a quite soft and elastic skin. Carrying on the history of the patient for another year I have to report that after having got completely well and after treatment had been discontinued for about six months he presented himself again for treatment at the hospital. He had now, after alcoholic excesses and exhausting work as a barman, developed a very large soft gland in the previously sound side of the neck, and another in the groin of the same side. His opsonic index was found to be very low. The glands in question rapidly broke down, leaving crateriform openings, which presented all the typical clinical appearances of a syphilitic gumma. No improvement having manifested itself under a very thorough anti-syphilitic treatment carried out in the hospital and the patient's tuberculo-opsonic index ranging always about 0·4, the tuberculin inoculations were recommenced with the result that he is now making what promises to be a very rapid recovery.

CASE 2.—The patient, a woman, aged 31 years, like the last, has been previously reported on.[2] Her history is as follows. She developed a tubercular infection of the glands of the neck at the age of 14 years. Then suppuration supervened and the abscesses were opened, the wounds became infected, and other glands also became involved. Later tubercular disease developed in the little finger of the right hand. The two terminal joints of that finger were removed 15 years ago, when the patient was 16 years old. About this time lupus broke out on her face and on her left arm and hand. At the age of 19 years she underwent treatment with Koch's original tuberculin. She received from three to four inoculations a day (the total of her inoculations amounting to 150). This treatment resulted in violent inflammatory reaction in the patches of lupus; a piece of bone sloughed out of her left arm; and she remained in hospital seriously ill for 13 weeks. She attributes, and no doubt rightly, the aggravation of symptoms and ultimate loss of her arm to these inoculations. We can see that there must have been produced a cumulative negative phase. After a respite, vigorous treatment was resumed in another hospital. The lupus patches were then frequently scraped and many glands were extirpated from the neck. In 1900 the Finsen light treatment was resorted to and was persevered in for 18 months. This effected superficial improvement in the condition of the face and neck but the disease continued to spread in the deeper structures and in particular in the bones of the left arm. Finally, it became necessary to amputate this limb. The disease now re-invaded the stump and broke out in the point of the shoulder and in the front of the chest. Roentgen rays were now tried unavailingly. Finally, in December, 1903, the patient, who was then in a very reduced physical condition, was referred to me by Dr. E. G. Graham Little for treatment by tuberculin inoculations. I was able to report in November, 1904, that the patient had arrived at a tolerably satisfactory condition in the matter of her general health. Her body weight had gone up and had reached 141½ pounds, as much as five pounds having on one occasion been gained in the interval between two successive inoculations. The discharge from the sinus over the sternum and from the sinus in the stump of the left arm had practically ceased. I am to-day able to state that the patient is in robust health, that the discharge from the sinuses has entirely ceased, and that she has been able for months to make use of an artificial limb. Except for some superficial patches of lupus on the face she appears to be perfectly well.

CASE 3.—The patient is a female, aged 20 years. When she presented herself for treatment in December, 1903, she had the appearance of a child. Her bones protruded through the skin of her back somewhat after the fashion in which bones protrude in dried fish. The point of her nose was covered with a thick mass of scabs superposed upon a very angry-looking patch of lupus. The angle of the jaw and the front of the neck were occupied by patches of lupus in a similar condition. Both her feet and her hands were affected with lupus. Her hands in particular were a mere mass of ulceration, the bones of the hand being also affected in many places. The patient has made slow but steady progress under the inoculation treatment. The ulcers on her right hand are nearly healed, and those on her left hand considerably amended, and her general physique has improved. The patches of lupus on the front of her neck and under the angle of the jaw are now represented by cicatrices and the patch of lupus on the nose is improving.

CASE 4.—The history of this patient who has been under the care of Mr. H. Stansfield Collier is as follows. In 1900, at the age of 30 years, the right testicle and a gland in the groin were removed on account of tubercular disease. Early in 1903 an abscess was opened some distance above the ankle on the outer side of the leg. The wound did not heal. In December another abscess had formed over the external malleolus and a considerable portion of the lower end of the fibula was gouged away. In July, 1904, another abscess developed in the lower third of the leg and was opened. Just before the patient was taken over for treatment by inoculation in January, 1905, the question of the amputation of the foot was being seriously entertained. The condition was as follows. A sinus wide enough to take a large drainage-tube led through the leg behind the ankle-joint. A deep ulcerated trench occupied the region of the extirpated fibula and extended under the inner malleolus for a considerable distance. Rapid improvement set in almost immediately after the inauguration of the inoculation treatment, the patient leaving hospital on the high road to recovery about the end of June. With the continuation of the treatment the ulcer entirely healed, the whole affected area being occupied by very soft elastic skin which did not in any way interfere with the movements of the foot. Towards the end of September, 1905, a small swelling developed in connexion with what had been the upper border of the ulcer. This was opened and scraped and the patient is now practically well.

CASE 5.—The patient, a woman, aged 28 years, presented herself for treatment on October, 1904, with tubercular ulcers on her legs which dated back to her fourteenth year. These had been treated by antiseptics of various kinds for 13 years and had been scraped and skin-grafted. On the right leg the ulcerated surface corresponded in its dimensions with a five-shilling piece. Around this was an extensive area of thin glossy skin. The ulcer on the left side occupied an area which extended from a little below the level of the ankle to nearly the middle of the leg. In this area the tendo-Achillis and the peroneal tendons were laid bare and the point of the foot was drawn down so that the toes alone came in contact with the ground. All round the ulcerated area the skin of the leg was thin and glossy. The patient's tuberculo-opsonic index worked out as 0·17. After admission to hospital the patient was treated with therapeutic inoculations of tuberculin, supplemented by occasional staphylococcus inoculations and the local application of formalin gelatine.[3] After six months' treatment the ulcer on the right leg had completely healed and that on the left leg had been reduced to comparatively small dimensions. The inoculation treatment, which had raised the tuberculo-opsonic index of the blood to 1·8 and which had maintained it generally well above 1, was now supplemented

[2] Loc. cit.

[3] THE LANCET, July 9th, 1904, p.

by skin grafting and the patient left hospital with the ulcers completely healed and looking a picture of health. This continued until some six weeks ago, when in association with a sinking away of the tuberculo-opsonic index to 0·8 a small vesicle developed on the inner side of the leg at the border of the healed ulcer. This broke down into a superficial ulcer corresponding in dimensions to a lentil. In association with an improvement in the tuberculo-opsonic power obtained by minute attention to dosage and proper interspacing of the inoculations, extension of this small ulcer has been arrested.

CASE 6.—The patient is a man, aged 35 years. When he presented himself for treatment in July, 1904, he had been for two years the subject of an inflammatory knobby tumefaction of the subcutaneous tissues in the region of the jaw and over a considerable area of the throat. The case had been diagnosed as actinomycosis and had been treated without result by scraping and iodide of potassium. The patient's opsonic index with respect to the tubercle bacillus was 0·67. With respect to the staphylococcus it was 1. The patient is now, after 15 months' inoculation with very small doses of tuberculin, nearly well. Throughout the course of the treatment it has been brought out very clearly (*a*) that the clinical condition corresponds in a very accurate manner with the tuberculo-opsonic index and (*b*) that the patient's opsonic index can be maintained at a much higher level when doses in the neighbourhood of $\frac{1}{100}$ are inoculated than when larger doses are employed.

CASE 7.—The patient is a man, aged about 35 years, a farrier. When he presented himself last June for treatment the dorsum of his hand was occupied by a deep ulcer corresponding in dimensions with a full-sized watch and surrounded by a raised edge. The ulcer had been treated by scraping. The patient's tuberculo-opsonic index stood at 0·85. Rapid improvement both in the opsonic index and in the clinical condition followed upon the inoculation of tuberculin, supplemented when this appeared desirable by the inoculation of a staphylococcus vaccine. The ulcer has now entirely healed and the site of the ulcer is covered in with soft and elastic skin which does not in any way impede the movements of the fingers.

Tubercular Invasion of the Lymphatic Glands.

In view of the uniformly successful results which are in my experience obtained by inoculation in connexion with tubercular glands it will suffice to recite by way of example only the following five cases.

CASE 1.—The patient was a young married woman who had undergone at the hands of two distinguished London surgeons three successive operations for the extirpation of glands. When she presented herself for treatment in January, 1904, three or four glands could be felt in the neck, the largest one being of about the size of a small walnut. After the diagnosis of tubercle had been confirmed by a test inoculation undertaken with Koch's old tuberculin, the vaccinal treatment with the T.R. tuberculin was inaugurated. Three months later, after six inoculations, conducted with doses which were gradually increased from $\frac{1}{10}$th milligramme to a maximum of $\frac{1}{3}$rd milligramme, the glands could no longer be felt and the dragging pains in the neck had entirely disappeared. After the disappearance of the glands a few more reinforcing inoculations were given. In January, 1905, the patient presented herself again, with swelling in the glands that had been previously affected. This swelling was, as before, associated with dragging pains and the patient was thinking of having recourse again to operative procedure. In lieu of this the tuberculin inoculations were resumed, with the result that after three inoculations, undertaken in the course of a month, the glands again completely disappeared. They have, so far as I can learn, given no further trouble.

CASE 2.—The patient was the wife of a medical man. She had suffered from childhood from swollen glands on one side of the neck. These had become the source of constant dragging pains and the largest gland, situated under the angle of the jaw, was large enough to produce considerable disfigurement. After three months of the inoculation treatment the glands had much diminished in size and no longer gave rise to any disfigurement or discomfort.

CASE 3.—The patient, who had been a nurse and who had already undergone two operations at the hands of a distinguished surgeon, presented herself for treatment in April, 1904, with a recurrence of tubercular glands in the neck. After three months' inoculations the swelling in the glands had entirely subsided. In association with this there was a very marked improvement in the general health. By the desire of the patient the inoculations are still being continued as a precaution against further recurrence.

CASE 4.—The patient, a girl, aged four years, came under treatment in connexion with a recurrence of glands very shortly after operation. Her tuberculo-opsonic index stood at 0·7. After a series of six or seven inoculations the swelling in the glands had entirely disappeared.

CASE 5.—The patient, aged four years, came under treatment at the end of June, 1905, in connexion with a recurrence of tubercular glands after operation and continued discharge from a deep gaping wound. By the end of September, after a course of tuberculin inoculations, supplemented on one or two occasions by an inoculation of staphylococcus vaccine, the wound had completely healed over and the glands on the opposite side of the neck were notably diminished in size. By the end of October treatment was discontinued, the swelling in the region of the wound and in the glands having entirely disappeared and the child being in absolutely robust health.

Tubercular Disease of the Genito-urinary System.

CASE 1.—The patient, a man, aged 20 years, when first seen 12 months ago was suffering from extreme frequency and looked worn with pain. He was only with difficulty able to draw himself up upright and could only with some distress climb upstairs. There were considerable swelling and tenderness in the prostate and back of the bladder and the urine contained some blood and a large quantity of pus. Microscopical examination revealed tubercle bacilli in considerable numbers in the urine. Cultures showed that there was no other bacterial invasion. The patient had been previously treated with inoculations of new tuberculin, the doses having been increased by geometrical progression up to $\frac{1}{10}$th milligramme. After the inoculation of the larger doses the pain and frequency of micturition were greatly aggravated. After waiting till the immediate effects of the last inoculation had passed off, inoculation was recommenced with $\frac{1}{1000}$th milligramme of new tuberculin. The tuberculo-opsonic index of the blood now stood at 0·62. After repeating the inoculation with $\frac{1}{1000}$th milligramme at intervals of ten days, and then tentatively advancing to a dose of $\frac{1}{100}$th milligramme without achieving any sensible improvement in the opsonic index or clinical symptoms the dose was reduced to $\frac{1}{1000}$th milligramme. The inoculation of this dose at ten-day intervals was followed by steady and sustained improvement both in the opsonic power and clinical symptoms. There was also a marked diminution in the prostatic tumefaction. After the dose had been for a time increased to $\frac{1}{500}$th milligramme it was again reduced to $\frac{1}{1000}$th milligramme. While the frequency of micturition and the prostatic swelling have been much abated, and while the patient is practically free from pain, his urine still contains tubercle bacilli. His condition is, however, now such that he is able to hold his urine for two hours at a time and is capable of undertaking without fatigue a long day's shooting.

CASE 2.—The patient is a young woman of very good physique. She came under treatment first in January, 1905, with a history of tubercular cystitis and tubercular disease of the kidney dating back two years. One of her kidneys had been removed and there was evidence of the involvement of the other kidney. The urine contained pus in considerable amount and in association with this many tubercle bacilli and several varieties of contaminating bacteria, among others proteus. The patient's tuberculo-opsonic index was tested on two occasions before the inoculation treatment was initiated. On the first occasion it stood at 0·75, on the second occasion at 0·35. An improvement in the patient's symptoms set in practically immediately after the first inoculation. The tuberculo-opsonic power rose on the day after inoculation to 1·7 and continued at this height, or near this point, for the next six days. An inoculation undertaken on this day with $\frac{1}{100}$th milligramme brought down the opsonic power of the blood. In association with this the patient complained of more pain. After the inoculations had been continued for about six months, when the tubercle bacilli had disappeared from the urine and when as a result of the inoculation of a proteus vaccine the bacillus proteus also had disappeared, the patient felt so well that she mooted the question of engagement and marriage. Since then she has suffered a relapse, developing an acute cystitis. This

attack, which was apparently associated with a reappearance of the bacillus proteus in the urine, is now subsiding.

CASE 3.—The patient, like the last, is a young woman of good physique who after suffering from pleural effusion and severe cramps in the loins suddenly in December, 1904, developed severe cystitis and hæmaturia. Tubercle bacilli were now found in the urine. When she came under observation in September last she was suffering from great frequency of micturition (up to 25 times in the night) and pain. Tubercle bacilli were sparingly present in the urine, while a form of pneumococcus was abundant. Her tuberculo-opsonic index stood on the first examination at 0·85, and on two subsequent occasions at 0·9 and 0·93 respectively. Inoculation was begun with a dose of $\frac{1}{10}$th milligramme of tuberculin, but this dose appears to have been excessive, inasmuch as the patient spent after inoculation a week of misery, the frequency of micturition rising on one occasion to 32 times in the night. The dose employed in the next inoculation was $\frac{1}{100}$th milligramme and this dose has been employed since with very satisfactory results, pain being greatly diminished and frequency of micturition now averaging five times in the night, while an opsonic index of 1·6 has been achieved.

CASE 4.—This case has already been reported on by me 12 months ago as follows.[4] The patient, a married woman, aged 43 years, was admitted to hospital under the care of Dr. D. B. Lees in the middle of March, 1903, complaining of frequency of micturition associated with severe local pain and dragging pain in the loins, in particular on the left side. The urine contained pus, epithelial casts, and tubercle bacilli in such numbers that they could be demonstrated in large clumps in every field of a microscope in preparations prepared from the urinary sediment. Examination of the bladder revealed the existence of a large open ulcer. The kidneys were enlarged and tender; the left one in particular was affected and suspicious signs were detected in the apex of one lung. Tuberculin treatment was begun in the middle of April, 1903. The effect exerted upon the body weight during the period the patient was in hospital is exhibited in the figures below:—

	Pounds.		Pounds.
April 20th	91	June 15th	103½
„ 28th	96	„ 22nd	105
May 11th	92½	„ 29th	107
„ 19th	93	July 6th	109½
June 1st	96	„ 13th	107½
„ 8th	101		

The drop of body weight which is recorded on May 11th coincided on the one hand with the development of increased local pain and symptoms of giddiness and flushing, and on the other hand with a rapid fall in the agglutinating power of the blood, which is displayed in Curve 1 (*supra*).[5] These were all, I take it, symptoms of the supervention of a negative phase dependent upon a too hasty inoculation of progressively increasing doses of vaccine. After leaving the hospital in July, much alleviated in the matter of pain and frequency of micturition, the patient attended as an out-patient and under the treatment her weight in September, 1903, reached 119 pounds. The tuberculin inoculations were continued up to July, 1904. All this while the tubercle bacilli, which were examined for almost every ten days, became gradually less numerous. By May they had completely disappeared from the urine. The patient none the less still suffered from serious bladder trouble—due, as appeared on examination, to cicatrisation and great thickening of the bladder walls and possibly to some superadded ulceration referable to septic invasion by the bacillus coli and by a Gram-staining diplococcus—micro-organisms which have been throughout present in millions in her urine. Taking up her history from this point I may add that shortly after the publication of the above report the patient came back with symptoms of a relapse and tubercle bacilli were once more found in her urine. Under the influence of further inoculations of tuberculin these again disappeared from the urine and she continues to be free from pain and is in very good health. She suffers, however, from incontinence.

CASE 5.—The patient is a man of some 45 years. His history is as follows. In 1904 the right testicle became swollen and an abscess formed which left behind a sinus in the posterior aspect of the scrotum. In July, 1905, when the patient came into hospital, the right testicle was found to be typically tuberculous and there was discovered also a small nodule in the left epididymis. The patient was unable to hold his urine for more than half an hour at a time night or day, and in association with this tubercle bacilli were found in the urine. He was now treated by inoculations of tuberculin and left hospital in September much improved. Since leaving hospital he has put on 14 pounds in weight and the frequency of micturition has been reduced, averaging now only four times in the night.

[4] Clinical Journal, Nov 9th, 1904.
THE LANCET, Dec. 2nd, 1905, p. 1599.

PART II.

TREATMENT OF SYSTEMIC TUBERCULAR INFECTIONS BY THE THERAPEUTIC INOCULATION OF A TUBERCLE VACCINE.

In connexion with pyrexial phthisis and other forms of pyrexial tuberculosis we are face to face with a problem which confronts us also in connexion with every other systemic infection—i.e., the problem as to whether, in view of the fact that the machinery of immunisation is already spontaneously called into action, any advantage can be looked for from the inoculation of bacterial vaccines. Before an answer can be given to the question we must try to form to ourselves (*a*) some conception of the conditions with which we have to deal in ordinary systemic infections such as are represented by continued fevers; and again (*b*) some conception of the special conditions which we have to deal with in pyrexial phthisis and similar tubercular affections.

Conditions which we have to take into account in connexion with ordinary continued fevers.—In the case of continued fevers, such as typhoid fever and Malta fever in man and anthrax in animals, bacterial elements are passing more or less continuously into the blood from regions like the spleen where the micro-organisms are cultivating themselves in close relation with the blood-vessels. These bacterial elements, the nature of which we need not pause to discuss, exert upon the organism not only toxic effects, but call forth also immunising responses, in all respects similar to those which are called forth by the inoculation of bacterial vaccines.

Where the influx of the bacterial elements which here come into consideration does not exceed a certain maximum there can be registered, no doubt after the intervention of a negative phase, a definite increase in the antibacterial substances in the blood. Such an increase is registered, for instance, in connexion with typhoid fever and Malta fever when, after the fever has persisted for some days, an agglutinative reaction greater than that which is obtainable with the normal blood is registered. By the aid of the antibacterial elements (of which the agglutinins furnish only the most easily demonstrated and therefore the most familar examples) the invasion of the blood stream is checked. If now by the continued elaboration of the antibacterial elements the bacteriotropic pressure of the blood is brought up to, and is sustained at, a sufficiently high level, the antibacterial effect makes itself felt not only in the actual blood stream but in the backwaters of the circulatory system where the blood flows comparatively slowly, and in the end also in the tissues. The invading micro-organisms will be finally disposed of when a lymph, rich in antibacterial elements, floods through all the foci of lowered bacteriotropic pressure in which the bacteria are esconced.

Alongside of the cases which run their course to this favourable conclusion there are other cases where the influx of bacterial elements into the blood is immoderate and uninterrupted. Here owing to a paralysis of the machinery of immunisation the antibacterial power of the blood will not be sustained, and the invading bacteria will establish themselves in the circulating blood. The possibility that by the incorporation of a bacterial vaccine into the body of a patient who is already staggering under a severe bacterial intoxication such a further quantum of poison might be added as would just suffice to overtax his power of resistance, is a risk which has to be considered in connexion with all therapeutic inoculations of bacterial vaccines, undertaken in connexion with systemic infections. That risk may according to circumstances be very grave or insignificantly small. Let me take the extreme cases. When, as in a case of fulminating typhoid fever, the system is profoundly intoxicated, and when the absence of the agglutination reaction and the diminished content of the blood in other antibacterial substances show that the patient's power of immunising response is probably already overtaxed, I presume that no one would like to take the responsibility of incorporating a further quantum of bacterial poison.

In the contrary case of a comparatively light attack of Malta fever, where the fever is likely to run on for months without any serious intoxication of the system, and where the imperfect development of the agglutination reaction seems to indicate that the immunising impulses are making default, I have gladly taken upon myself, and have counselled others to take upon themselves, the responsibility of applying further immunising stimuli in the form of a carefully safeguarded series of inoculations. In each such case the event has justified the procedure.

The cases last considered have a direct application in connexion with the question of undertaking inoculations of a tubercle vaccine in connexion with pyrexial phthisis. I would point out in this connexion that there is, as between inoculations of bacterial vaccines made into the subcutaneous tissue and the introduction of bacterial poisons directly into the blood stream, a very important difference which must be kept in view. If the vaccines were to be incorporated directly into the blood stream, we should thereby contribute directly to the intoxication of the central nervous system and the heart; and we should, as the very disappointing results which are achieved in the immunisation of horses by the intravenous injection of diphtheria toxins clearly show, be advancing but little in the direction of immunisation. On the contrary, when bacterial vaccines are incorporated into the subcutaneous tissues and when they therefore come into application in a concentrated form upon these, and are held fast by these, we may quite well be effecting a great deal in the way of immunisation without contributing in any appreciable manner to the intoxication of the central nervous system and heart.

Special conditions which we have to take into account in connexion with pyrexial phthisis and other localised tubercular infections which are associated with pyrexia.—In the case of localised tubercular infections which are associated with pyrexia the conditions are different from those in the continued fevers which have been under discussion (*a*) in the respect that the influx of the bacterial elements into the blood takes place from regions which do not stand in immediate relation to the blood stream and (*b*) in the further respect that this influx is discontinuous, and stands in definite relation (to an extent which does not hold good in the case of other continued fevers) with causes which are to a quite appreciable degree under control. The causes which come into consideration here are in particular physical exertion and mental effort or excitement. Under the influence of these causes there can be registered, not only a rise of temperature, but also a variation of the opsonic power similar to that which is encountered in connexion with the inoculation of tubercle vaccine. I may give as instances of such variations the cases of two phthisical patients, who took part in a dance or other entertainment, with the result that they both became ill, and that their opsonic indices, which had never previously been lower than 1, declined to 0·12 and 0·33 respectively; further, the case of another phthisical patient whose opsonic index fell in connexion with overwork to 0·2 from a level of over 1. I may refer you also in this connexion to a paper[6] by my friends Dr. H. Meakin and Dr. C. Wheeler which records similar effects produced in the case of phthisical patients in connexion with walking.

We have a very simple explanation of these facts if we suppose that, under the influence of the limb and chest movements, and the circulatory disturbance and increased lymph flow which are associated with excitement, physical exercise, or mental overwork, tuberculous poisons from the infected tissues are conveyed into the blood. Especially may an influx of lymph, loaded with tuberculous poison, be expected in the case where a patient who is the subject of a tubercular infection of the leg undertakes walking. We have already in Curve 4, *supra*, seen in connexion with a case of tuberculous disease of the leg a rise in the tuberculo-opsonic index which was to all appearances the result of running about. I have also quite recently seen another case of a similar association in the case of a boy with tuberculous hip-disease who, after lying on his back for years with a normal temperature, developed pyrexia on beginning to walk. No doubt this boy conveyed into his blood as he walked a stream of lymph which had passed through the old tubercular focus. In connexion with this I registered a tuberculo-opsonic index of 1·4.

Possibility in connexion with pyrexial phthisis and other localised tubercular infections which are associated with pyrexia of quieting the circulation and stanching the lymph stream in such a way as to arrest the auto-inoculation, converting the systemic infection into a purely localised infection.—The fact that in pyrexial phthisis and other localised tubercular infections which are associated with pyrexia the bacterial poisons are not generated in direct relation with the circulatory system is, as reflection will show, a fact which is pregnant with all-important consequences in connexion with the therapeutics of the systemic infections we have here in view. While it may be possible in the case of continued fevers like typhoid fever to effect something in the direction of reducing the severity of the intoxication and the dosage of the auto-inoculations by keeping the patient perfectly quiet, the abolition of the intoxication and the arrest of the auto-inoculations constitute in the case of phthisis not a remote ideal but an ideal which is every day realised. The complete rest in bed, which gradually reduces the temperature in the large majority of cases of tuberculous phthisis, as well as in other localised forms of tubercular infection, is, I take it, to be regarded as a therapeutic measure for making an end to those auto-inoculations which follow upon every over-exertion, and which make the life of the phthisical patient when abandoned to his own devices what my fellow worker Dr. R. H. Urwick has shown it to be,[7] to wit, a succession of negative and positive phases. I take it that the rest in bed might, with a view to further stanching the lymph flow with advantage, be supplemented in every case by the administration of therapeutic agents which will increase the coagulability and viscidity of the blood. I have no doubt that this object is already in many cases undesignedly and unwittingly attained by placing the patient on a dietary of milk.[8]

Consideration of the question as to how far the patient has been brought in the direction of a cure when his pyrexia has been abolished and his auto-inoculations have been arrested by confinement to bed.—We may usefully ask ourselves exactly how much will have been achieved in the case of a tubercular infection if, when the influx of tuberculous poison into the blood has been arrested and the pyrexia has been abolished, we stop at this point. The question is an all-important one in view of the years and years of complete inaction to which many patients are condemned on the theory that they are, while they continue to rest and wait, every day making progress in the direction of a cure. To everyone who has surveyed the tuberculous patients laid out on spinal chairs in our seaside health resorts—waiting—or the patients who are lying in bed or upon deck chairs in our open-air sanatoria—waiting—it is plain as demonstration can make it that there is gained for the patient, by the arrest of the influx of tuberculous poison into his blood, a power of assimilating his food, and an appearance of vigorous health. If only to the appreciation of this fact there could be added the belief that the cure of bacterial infections depends neither upon the storage of fat, nor upon the bronzing of the skin, nor yet upon the breathing of fresh air (sea-coast air, country air, pine-wood air, mountain air, or warm southern air), but only upon the destruction of the invading bacteria by the antibacterial substances of the blood (with or without the coöperation with the leucocytes), we should, I think, have come close to the truth.

It is, at any rate, my belief that with the cutting off of the auto-inoculations progress in the direction of immunisation is arrested and that with that arrest the blood reverts in every case to the inferior level of antibacterial power at which the blood of the subjects of strictly localised tubercular infection normally stands. If this is so—and I infer from what I have gathered from Dr. Lawson and Dr. Bulloch that this is the condition of affairs in phthisis when it has by rest in bed been brought back into the condition of a strictly localised infection—it is eminently comprehensible that the patient is liable to relapse when on return to work he over-exerts himself in such a way as to convey into his blood—as happened in the case of the tuberculous disease of the hip before adverted to—tuberculous elements from foci in his tissues in which the tubercle bacillus has survived.

Programme of treatment which would appear to be indicated in the case of pyrexial phthisis or other localised tubercular infection which may be associated with pyrexia.—If the views which I have developed above are in harmony with the facts, the following programme would seem to be marked out for

[6] Brit. Med. Jour., Nov. 25th, 1905.

[7] Brit. Med. Jour., July 22nd, 1905.

[8] Vide author's paper, THE LANCET, Oct. 14th, 1905.

us in connexion with every case of pyrexial phthisis. 1. Our first efforts ought to be directed to bringing back the infection to the condition of a purely localised infection. Rest in bed and the adoption of measures for increasing the coagulability of the blood would be the appropriate methods for the achievement of this end. 2. As soon as this first object has been achieved it should be our aim to substitute for the inappropriately adjusted and inappropriately interspaced auto-inoculations which wore down the patient without achieving effective immunisation a system of appropriately adjusted and appropriately interspaced inoculations of a tubercle vaccine. 3. Finally, as soon as by the means just indicated a satisfactory anti-bacterial pressure has been achieved in the blood, it should be an object of endeavour, by the regulation of the patient's exercises and by attention to his blood pressure and by taking steps where necessary to diminish the coagulability of his blood, to irrigate in a methodical manner all the foci of infection with a lymph rich in antibacterial substances.

Bibliography of the subject of the treatment of bacterial disease by the therapeutic inoculation of bacterial vaccines controlled by blood examinations.—Robert Koch: Ueber die Agglutination der Tuberkelbacillen, und ueber die Verwerthung dieser Agglutination, Deutsche Medicinische Wochenschrift, 1901, No. 48, p. 829. Wright: Notes on the Treatment of Furunculosis, Sycosis, and Acne by the Inoculation of a Staphylococcus Vaccine and generally on the Treatment of Localised Bacterial Invasions by Therapeutic Inoculations of the Corresponding Bacterial Vaccines, THE LANCET, March 29th, 1902, p. 874. Wright: A Lecture on Therapeutic Inoculations of Bacterial Vaccines and their Practical Exploitation in the Treatment of Disease, Brit. Med. Jour., May 9th, 1903. Wright: On Some Further Improvements in the Procedures for Testing and Judging by the Naked Eye of the Agglutinating and Bacteriolytic Effects exerted by the Sera of Patients Suffering from or Preventively Inoculated against Typhoid Fever, Malta Fever, and Tuberculous Infection, THE LANCET, July 25th, 1903. E. Graham Little: A Case of Lupus Vulgaris treated with Tuberculin, British Journal of Dermatology, September, 1904. Wright and Douglas: An Experimental Investigation of the Rôle of the Blood Fluids in Connexion with Phagocytosis, Proceedings of the Royal Society, vol. lxxii., p. 357 et seq., 1903. Wright and Douglas: Further Observations on the Rôle of the Blood Fluids in Connexion with Phagocytosis, Proceedings of the Royal Society, vol. lxxiii., p. 129 et seq., 1904. Wright: On the Treatment of Acne, Furunculosis, and Sycosis by Therapeutic Inoculations of Staphylococcus Vaccine, Brit. Med. Jour., May 7th, 1904. Wright and Douglas: On the Action exerted upon the Staphylococcus Pyogenes by Human Blood, and on the Elaboration of Protective Elements in the Human Organism in response to Inoculations of a Staphylococcus Vaccine, Proceedings of the Royal Society, vol. lxxiv., p. 147, 1904. Wright and Douglas: On the Action exerted upon the Tubercle Bacillus by Human Blood Fluids, and on the Elaboration of Protective Elements in the Human Organism in response to Inoculations of a Tubercle Vaccine, Proceedings of the Royal Society, vol. lxxiv., p. 160, 1904. Wright: A Lecture on the Inoculation Treatment of Tuberculosis, Clinical Journal, Nov. 9th, 1904. Bulloch: On the Principles underlying the Treatment of Bacterial Diseases by the Inoculation of the Corresponding Vaccines, Practitioner, November, 1905. Wright and Reid: On the Possibility of Determining the Presence or Absence of Tubercular Infection by the Examination of the Blood and Tissue Fluids, Proceedings of the Royal Society, 1905. Wright and Reid: On Spontaneous Phagocytosis, and on the Phagocytosis which is obtained with the Heated Serum of Patients who have responded to Tubercular Infection, or, as the case may be, to the Inoculation of a Tubercle Vaccine, Proceedings of the Royal Society, 1905.

A STUDY OF SOME POINTS IN RELATION TO THE ADMINISTRATION OF TUBERCULIN (T.R)

CONTROLLED BY OBSERVATION OF THE OPSONIC INDEX IN PULMONARY TUBERCULOSIS.[1]

BY DAVID LAWSON, M.A. ST. AND., M.D. EDIN., F.R.S. EDIN.,

SENIOR PHYSICIAN TO THE SANATORIUM AT BANCHORY, SCOTLAND;

AND

IAN STRUTHERS STEWART, M.D. EDIN.,

CLINICAL PATHOLOGIST TO THE SANATORIUM AT BANCHORY, SCOTLAND.

THE course of research which we have undertaken is one which cannot be completely carried out under a period of three years. It must therefore be understood that the present paper, covering as it does only a small area of the field to be explored, is of an essentially preliminary nature. In this communication we submit for consideration certain questions which have suggested themselves to our minds and the means which we have taken to elicit answers to these. The cases of pulmonary tuberculosis studied—with the exceptions named—were cases in which pyrexia at the time of making the observations was absent. They were for the most part cases in which the temperature had subsided under sanatorial or climatic treatment.

Our method consisted in making *daily* examinations of the blood of each patient for a short term previous to the commencement of inoculations and then daily after the inoculation of tuberculin had been begun. This method possesses certain advantages over the less laborious method of estimating the opsonic index at the longer intervals usually followed by others. These advantages will become apparent as we proceed. The total number of blood estimations made during the period covered by this paper is 1750. As four-hourly temperature records, with clinical notes added from time to time, were kept throughout the period during which the patients were under observation, it has been possible in some instances to form an opinion as to the relationship existing between inoculations of tuberculin, variations in the opsonic index of the blood, and the more common clinical symptoms and signs usually observed in the course of the disease.

In considering how best to present the facts observed the method of "question and answer" seemed to us to be superior to other forms, and therefore that mode has been adopted. The questions which we have set ourselves to answer in this paper are as follows. 1. Does any difference exist between the opsonic indices of the blood in (*a*) healthy persons, (*b*) in persons who have suffered from tuberculosis and are now cured, and (*c*) in persons who are suffering from pulmonary tuberculosis (not in an acute form)? If so, can the fact be turned to any practical account in the *diagnosis* of the disease? 2. Assuming that classes (*a*) and (*c*) have been inoculated with small doses of tuberculin, is such inoculation followed by a difference in the behaviour of the opsonic index in each class? If so, can this fact be utilised in connexion with the *diagnosis* of the disease? 3. Is there any other means by which the presence and duration of the *negative phase* of the blood can be reliably determined than by the laborious method of making daily observations of the opsonic index? 4. To what practical use, if any, can the facts so far elicited be put in the *treatment* of pulmonary tuberculosis?

Question 1.—We first proceed to consider the subject opened up by Question 1—namely, "Does any difference exist between the opsonic indices of the blood (*a*) in healthy persons, (*b*) in persons who have suffered from pulmonary tuberculosis and are now cured, and (*c*) in persons who are suffering from pulmonary tuberculosis (not in an acute form)?[2] In Table I., through the kindness of Dr. W.

TABLE I.—*The Opsonic Indices of the Bloods of 25 Healthy Persons.*

E. B.	1·4	
D. L.	1·2	
L. S.	1·2	
T. C. L.	1·2	
W. S.	1·2	
J. C.	1·2	
J. G.	1·1	
N. J.	1·1	
C. C.	·1	
R. L.	1·1	
H. M.	1·1	
W. T.	1·0	0·9 to 1·2 (country
N. S.	1·0	
N. H.	1·0	Average 1·0
J. M.	1·0	
W. T.	1·0	
A. T.	1·0	
W. C.	1·0	
N. M.	0·9	
G. C.	0·9	
W. O.	0·9	
W. O. J.	0·9	
R. J.	0·9	
J. G.	0·9	
J. R.	0·9	
Dr. Bulloch's 66 cases		0·8 to 1·2 (town)
		Average 0·96
Limits of sound health	0·9 to 1·2	

Bulloch, we are able to present you with the result of the examinations of the blood of a large number of healthy persons in addition to those obtained by ourselves. Considering our own figures first, your attention is directed to the

[1] A paper read before the Royal Medical and Chirurgical Society on Nov. 28th, 1905.

fact that whilst a marked degree of variation in the level of the opsonic indices recorded obtains, it is, with one trivial exception, a variation within clearly defined limits—namely, between 0·9 and 1·2. The result of Dr. Bulloch's observations on the same lines nearly coincides with ours. So that we may take it that, for all practical purposes, the opsonic index of a healthy person in relationship to the tubercle bacillus does not vary beyond the limits of 0·9 and 1·2.

Our next inquiry was made in connexion with the blood of patients who at one time were known to be the subjects of tuberculous lung disease and who had apparently recovered. For this purpose we selected 30 persons who had passed through our hands as patients and who, having fulfilled all the known tests of being cured, are now considered useful lives. Here we were at once struck by the fact that although to all outward appearance these persons were as healthy as those dealt with under the previous heading their indices differed materially from those of the others. In Table II.

TABLE II.—*The Opsonic Indices of the Blood of 30 Cases of Pulmonary Tuberculosis cured in Sanatoriums without Inoculation.*

Case.	Interval elapsed since patient discharged from sanatorium.		Opsonic index.
	Years.	Months	
1	3	6	0·5
2	1	9	0·5
3	3	2	0·6
4	—	9	0·7
5	2	2	0·7
6	3	1	0·7
7	—	8	0·7
8	—	7	0·7
9	2	6	0·8
10	—	6	0·8
11	4	3	0·9
12	—	4	0·9
13	4	4	0·9
14	1	8	1·0
15	3	6	1·0
16	3	6	1·0
17	1	1	1·0
18	1	9	1·1
19	1	8	1·1
20	1	6	1·1
21	—	9	1·1
22	—	6	1·2
23	3	7	1·2
24	4	2	1·2
25	1	10	1·6
26	4	3	1·7
27	3	6	1·7
28	—	6	1·8
29	1	2	2·0
30	1	2	2·1

you will find that not one half of their number are to be found within the limits which we have set down as those of normal health. In 10 cases the opsonic index stood below 0·9 and in six cases above 1·2. In two instances it touched as high as 2·0. Notwithstanding the existence of apparent good health in the cases of one-third of their number their bloods were shown to be defective in the supply of protective substances in relation to the tubercle bacillus.

Continuing the line of inquiry, we next examined the blood of 25 persons undoubtedly suffering from pulmonary tuberculosis (other than acute forms) and at the time of examination undergoing sanatorium treatment. Here (Table III.) in three instances an index was present sufficiently high to bring it within the limits of normal health, but in the remainder of the cases the level of the index was lower than that associated with health. We thus arrived at the conclusion that whilst there is little difference between the opsonic indices of persons under Classes 2 and 3 the difference between these and Class 1—the healthy persons—is definite and characteristic. The former are invariably lower than those in

TABLE III.—*Opsonic Indices of the Blood in 25 Cases of Pulmonary Tuberculosis (other than Acute Forms).*

Case.	Sex.	Age	Lobes.	Opsonic index.
1	M.	25	2	1·0
2	F.	22	2	0·9
3	M.	28	3	0·9
4	M.	28	4	0·8
5	M.	52	4	0·8
6	M.	27	3	0·8
7	F.	26	2	0·8
8	M.	28	1	0·8
9	F.	26	4	0·8
10	M.	—	3	0·8
11	F.	26	3	0·7
12	M.	29	3	0·7
13	M.	52	3	0·7
14	F.	18	2	0·7
*15	F.	34	Miliary	0·7
16	M.	28	4	0·7
17	M.	24	2	0·7
18	M.	28	2	0·7
19	M.	27	2	0·7
20	M.	36	4	0·7
21	M.	36	5	0·6
22	F.	32	1	0·6
23	F.	24	3	0·6
24	M.	48	2	0·5
*25	M.	27	Miliary	0·5
—	—	—	—	Average 0·72

* Terminal miliary.

health. Dr. A. E. Wright has suggested that the opsonic index may be used for the purpose of diagnosing the presence of tubercular disease and the effect of this observation is to confirm the soundness of the view which he has expressed. In cases where there is doubt as to the diagnosis an opsonic index beyond the limits of health—that is, either above 1·2 or below 0·9—may be regarded as highly suggestive of the presence of tubercular invasion.

A case of some interest may be cited in which there existed some doubt as to the diagnosis. There was a history of slight continued pyrexia which subsided two weeks after admission to the sanatorium. Only very occasional slight cough was present. No sputum was available for bacteriological examination and the physical signs at the right apex were suggestive of early infiltration. Our suspicions as to the presence of the lesion were strengthened by the appearance seen on x ray examination. It occurred to us that an examination of the blood might prove of assistance. This was made and the abnormally high index of 1·5 was found to be present. The suspicion thus further increased was shown to be well founded when about a week afterwards expectoration appeared and bacilli were found in considerable numbers.

Question 2.—The next part of our inquiry was directed towards discovering whether or not there exists any difference in the changes which take place in the opsonic index of the blood after inoculation of small doses of tuberculin in the first and third classes of persons already dealt with. In order to attain this end we wished to inoculate tuberculin (T.R.) in small amounts into healthy persons and to persons suffering from pulmonary tuberculosis respectively, but for obvious reasons a difficulty presented itself in the shape of securing an adequate supply of healthy subjects. In addition to the results of inoculating healthy subjects obtained in ourselves we have succeeded in obtaining the results secured in two other cases of healthy members of the profession. In so far as the inoculations were not followed by any sign of lowering of the protective substances in our sera we had no room for anxiety. Indeed, exactly the opposite phenomena ensued. Our indices in each case immediately rose and from being 1 and 1·1 previously to inoculation they speedily attained high levels—in one case reaching to 2·1. This feature, then, is common to the observations made on healthy subjects so far as we have been able to secure any—

after tuberculin inoculation the level of the opsonic index does not fall but, on the contrary, immediately rises. In marked contrast to this stand the behaviour of the opsonic indices of 25 patients suffering from pulmonary tuberculosis, ascertained immediately after inoculation with small doses of tuberculin (T.R.). These cases (Table IV.) with the exception of two instances, in the cases dealt with amounting to over 50 per cent., where, although tuberculosis is undoubtedly present, the temperature reaction after inoculation with the T.R. preparation gives no indication of its presence whatever, negative phase being present in every instance. Temperature disturbance, therefore, is not to be relied upon.

TABLE IV.—SHOWING 25 CONSECUTIVE CASES OF PULMONARY TUBERCULOSIS IN WHICH NEGATIVE PHASE FOLLOWED THE INOCULATIONS OF SMALL DOSES OF TUBERCULIN (T.R.).

Day.	A.	B.	C.	D.	E.	F.	G.	H.	I.	J.	K.	L.	M.	N.	O.	P	Q.	R.	S.	T.	U	V.	W.	X.	Y.
1	*0·9*	*0·7*	*0·4*	*0·8*	*0·7*	*0·8*	**1·2*	*0·9*	*1·5*	*0·8*	*1·0*	**1·0*	*0·6*	**1·1*	*1·0*	*2·1*	*1·3*	*1·3*	**1·2*	*0·6*	*0·5*	**1·1*	*1·0*	*1·3*	*0·7*
2	0·8	0·4	0·2	0·4	0·4	0·7	0·9	0·8	0·9	0·6	—	—	0·4	—	0·4	—	0·5	0·5	1·2	0·5	0·3	0·8	1·0	0·9	0·6
3	0·4	0·8	0·3	0·8	0·3	—	1·3	0·8	0·5	0·6	0·4	0·6	0·4	0·6	1·0	1·1	1·3	1·3	—	0·4	0·8	1·1	1·0	1·2	0·8
4	0·5	0·9	0·9	0·8	—	1·2	0·4	—	1·0	—	0·4	0·9	1·2	0·9	0·8	0·7	1·4	1·3	1·1	0·9	1·1	1·4	1·0	0·7	0·6
5	0·8	0·8	0·6	0·9	—	0·6	1·2	1·0	0·5	0·5	1·0	0·9	1·2	1·0	—	1·6	0·7	—	1·0	0·9	—	1·0	0·8	1·2	1·0
6	0·8	0·8	*0·7*	0·7	1·0	0·6	*1·2*	0·6	0·8	0·6	1·0	0·7	—	0·7	0·9	1·6	1·5	1·0	1·4	0·9	1·0	0·7	1·4	1·2	0·4
7	0·8	0·8	0·4	1·1	1·7	1·4	1·2	—	—	0·6	1·3	1·0	0·7	0·7	1·5	1·3	1·2	0·8	1·3	—	1·0	1·0	1·5	1·3	1·2
8	1·0	1·0	0·6	0·8	*0·9*	1·0	1·2	1·2	1·0	1·0	—	0·9	*0·7*	1·3	1·5	0·7	—	1·5	1·3	0·7	0·5	1·0	1·5	0·8	*0·9*
9	1·3	1·0	0·6	*0·9*	0·8	2·3	1·8	*1·1*	1·0	0·8	—	0·8	0·6	*1·3*	1·1	1·1	1·6	0·8	1·6	1·2	1·2	1·3	1·5	*1·4*	0·6
10	*1·0*	0·9	0·5	0·8	1·1	—	*1·3*	—	1·0	*1·0*	—	0·7	0·7	1·0	1·5	1·4	1·2	1·0	—	0·5	—	1·4	1·5	0·9	0·9
11	·3	*0·8*	0·6	0·8	0·8	1·2	1·3	0·9	1·1	0·7	—	0·8	1·2	0·9	0·9	1·8	0·8	0·9	1·4	—	—	1·5	1·8	1·2	1·4
12	1·3	—	0·7	0·7	0·8	1·6	0·5	0·9	1·3	—	—	0·8	—	1·0	—	1·2	0·9	—	1·3	—	—	*1·2*	1·4	1·2	0·7
13	1·2	—	1·1	0·3	0·8	—	1·3	0·8	1·1	0·4	—	0·5	—	1·7	*1·4*	—	1·2	1·0	*1·7*	—	—	1·4	2·2	1·2	0·9
14	1·2	—	*1·0*	1·0	0·9	1·2	1·4	0·6	1·2	0·4	—	1·5	—	—	0·6	1·4	1·0	2·1	—	—	—	1·0	*1·4*	1·1	0·7

* Negative absent on first but present on second inoculation. (The italic figures signify that the patient was inoculated at this point.)

were at the time of inoculation all apyrexial. You will observe that in each instance—there is no exception—a distinct fall in the level of the opsonic index succeeded the inoculation. The period covered by this fall Dr. Wright first designated by the term "negative phase." There seems, then, to be this distinction between the behaviour of the blood of healthy persons and that of persons suffering from pulmonary tuberculosis, that whilst in the case of the latter inoculation of small amounts of tuberculin (T.R.) is at once followed by the establishment of a negative phase no such phenomenon appears in the former. Provided further observations determine the constancy of the presence of a negative phase after inoculation of small doses of tuberculin in other forms of tuberculosis, there seems to be a practical application of this observation in relation to diagnosis. The appearance of a negative phase after inoculation of a small quantity of tuberculin (T.R.) should enable one to distinguish between the blood of a subject of tubercular invasion and that of a person in sound health.

Question 3.—Assuming the correctness of the conclusions already arrived at and the value of the indications given by the presence of the negative phase after inoculation of tuberculin, it seemed to us extremely desirable that a shorter and less laborious method of recognising the incidence and duration of the negative phase should become available than by routine blood examinations. In this connexion we may say at once that observation of the behaviour of the respiration and pulse yielded us no light whatever. Others made upon the relationship existing between the negative phase and variations in the temperature, whilst they failed to secure the end in view, elicited some facts of sufficient importance to be worthy, as it seemed to us, of being placed on record.

With the object of ascertaining the *relative incidence of negative phase and temperature disturbance after inoculation had been administered* to the end of assisting us in arriving at a diagnosis, we placed 25 cases of well-marked pulmonary tuberculosis under four-hourly temperature records, and inoculated each with a small dose of tuberculin. The result of this inquiry is seen in Table V., where it is shown that whilst after inoculation a negative phase was obtained in 18 cases, only in four instances did the temperature show any disturbance. On examining the results obtained by re-inoculating the remaining nine who had failed to respond the comparison still favours the negative phase. If we use, as was done here, three inoculations we discover that whilst temperature disturbance falls to be noted in only 47 per cent. of the cases the negative phase is present in 100 per cent. When Koch's old tuberculin was introduced we were told to base our conclusions as to the presence or absence of tuberculosis upon the temperature reaction which followed inoculation of that tuberculin. It is here shown there are many

The establishment of a negative phase, on the other hand, as compared with temperature disturbance, is a safe and reliable guide in the diagnosis of some types of pulmonary tuberculosis.

TABLE V.—*Showing the Comparative Incidence of Negative Phase and Temperature Disturbance in 25 Cases of Pulmonary Tuberculosis after Three Injections of Tuberculin (T.R.).*

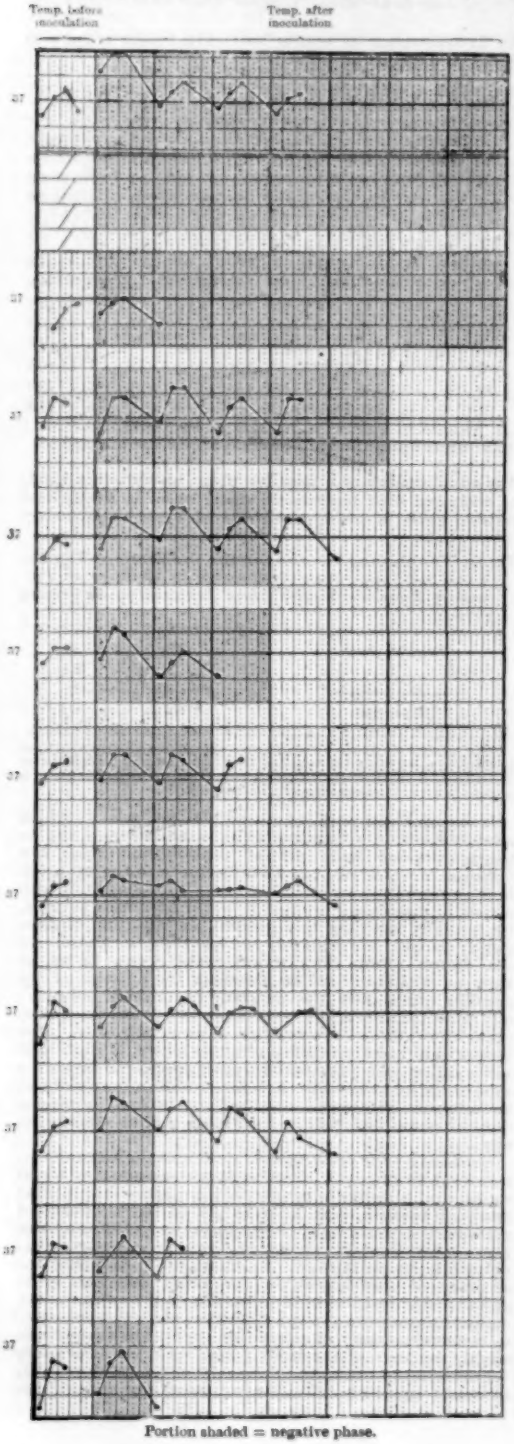
Negative phase.			Temperature.		
18	6	1	4	5	2
100 per cent.			47 per cent.		

Thus, whilst temperature disturbance—the guide recommended to us by Koch in using his old tuberculin—is in this instance absent in over 50 per cent. of cases of undoubted tuberculosis, the negative phase is present in every instance—namely, 100 per cent.

In course of our work we observed 11 instances in which establishment of a negative phase coincided with rise in temperature—we leave out of consideration those few instances in which it appeared to be accompanied by a fall in the temperature curve. We examined these minutely with a view to discovering whether it would have been possible, by carefully watching this pyrexial manifestation, to have rightly gauged the duration of the negative phase. In the figures (Table VI.) shown there seems to be no harmony whatever. In two instances the duration of the negative phase and the pyrexial disturbance coincide; otherwise the duration of the temperature exceeds, and is exceeded by, that of the negative phase equally often. The temperature reaction when present, as shown, is slight and in the majority of instances does not exceed three days. We were therefore reluctantly forced to conclude that, alike as an indication of the incidence and of the duration of the negative phase, temperature disturbance is of no value whatever.

Question 4.—We come now to deal with the last question and what is, after all, the most important question which we have set ourselves to answer in this paper—viz., to what practical use can these facts be put in the treatment of pulmonary tuberculosis? If the observation of the negative phase is important in relation to diagnosis much more important is its relationship to treatment. Assuming the accuracy of the proposition, for which there are good grounds, that inoculation of tuberculin (T.R.) reinforces the negative phase when present at the time of inoculation, then it becomes a matter of paramount importance to ascertain exactly the state of the blood before we inject tuberculin. We have taken 120 cases of inoculation of patients under treatment in which daily observations of the state of the

TABLE VI.—*Chart showing the Relationship of the Duration of the Temperature Disturbance to that of the Negative Phase in the 11 instances out of 160 Inoculations with Small Doses of T.R. Tuberculin in which they occurred together.*



Portion shaded = negative phase.

blood were made before and after inoculation had taken place. The result of an analysis of these is shown in Table VII. In 15 instances no negative phase occurred.

TABLE VII.—*Showing the Incidence and Duration of the Negative Phase produced by Inoculation of Small Doses of Tuberculin T.R. during Treatment of Pulmonary Tuberculosis (120 instances).*

No negative phase.	Persistent negative phase.	Day.												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
		14	12	10	5	7	4	10	4	4	3	4	1	1	5
15	21	84													

In 21 cases a persistent negative phase—that is, a negative phase extending beyond 14 days—appeared and the duration of the negative phase in the remaining 84 cases varied as shown in the diagram. A detailed consideration of those under columns 1 and 2 need not here detain us but it is otherwise in regard to the remaining 84 cases. Taking the figures as they stand it may be profitable to consider what would have occurred had inoculation taken place by routine—say, twice weekly. (See Table VIII.) If all the patients had been re-inoculated on the third day, in 46 instances, in so far as they would in those cases have been re-inoculated whilst the negative phase was still present, the inoculation instead of doing good would probably have done harm. Similarly, from re-inoculation performed on the seventh day 20 would probably have derived harm, and so on, as is shown in the Table. In direct proportion as we

TABLE VIII.—*Showing the Proportion of Instances in which Inoculation made on various days would in the foregoing 84 Cases have taken place during the Negative Phase.*

Inoculation on the—	Negative phase.	Percentage.*
Third day	46	55
Seventh day	20	24
Tenth day	9	11
Thirteenth day	5	6
After fourteenth day	4	5

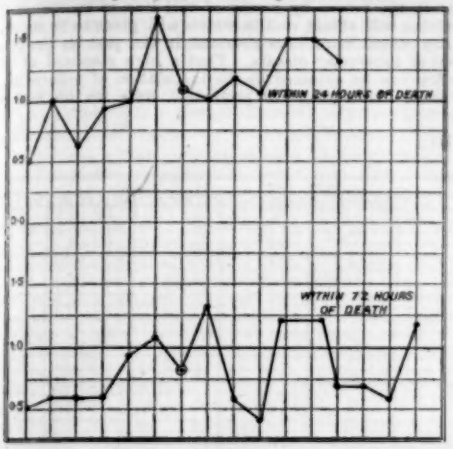
* Fractions ignored.

Thus, re-inoculation on the eighth day would have avoided the negative phase in 77 per cent. of instances, or in rather more than three out of four instances (modify). Daily observation of the opsonic index of the blood, by enabling one to avoid inoculating during the negative phase, would have prevented harm being done in the remaining one-fourth of the cases.

increase the length of interval between the first and second injections up to the end of a fortnight, the risk is reduced from 55 per cent. at three days to 5 per cent. at the end of 14 days. We have, therefore, *in daily observations of the opsonic index* an invaluable guide which enables us to do what can be done by no other known means—namely, to avoid re-inoculation at a time when, instead of exerting a beneficent action upon the course of the disease, it will promote the furtherance of toxic processes.

The next point which we submit for consideration is the effect obtainable by inoculations of tuberculin by this method in cases which climatic and sanatorium treatment has hitherto, whilst benefiting, failed to cure. It is convenient to consider first two cases of miliary tuberculosis which did badly; indeed, both died. We may say that tuberculin inoculations were given at the urgent request of friends and with the full approval of consultants who saw both patients at a late stage of the disease. In neither case, although the record of the opsonic index (Table IX.) brings us up to very nearly the time of death—in one case to within 24 hours and in the other within 72 hours—is it very low. Indeed, standing much higher than that of some cured patients, it is surprisingly high. Reduced to chart form, as can be seen in Table IX., both share this in common, that they show large variations, at times reaching above normal and at times passing below. Their opsonic charts resemble their temperature charts in the irregularity and the amplitude of the curve which they present. Simply, therefore, for the opsonic index to reach a high level from time to time does not necessarily imply that improvement is taking place. The inoculations in these miliary cases did no good.

TABLE IX.—*Opsonic Indices taken Daily during the Terminal Miliary Stage of Pulmonary Tuberculosis.*



As has been already pointed out, the majority of cases dealt with were of long standing, and as they are for the most part under treatment now we are not in a position to state the ultimate result obtained in those cases. Some of those patients had spent years abroad at health resorts of the highest repute and had supplemented that course by undergoing terms of sanatorium treatment in this country. It was at the end of such treatment that the bloods were examined and here (Table X.) you observe that uniformly

TABLE X.—*The Opsonic Indices of 25 Cases of Pulmonary Tuberculosis after varying Terms of Treatment (without Tuberculin Inoculations).*

Initial.	Duration of disease.		Duration of treatment.				Opsonic index.
			Climatic.		Sanatorium.		
	Years.	Months.	Years.	Months.	Years.	Months.	
M.	2	6	1	—	1	—	1·1
K.	1	2	—	—	1	2	1·0
L.	—	5	—	—	—	5	0·9
H.	—	5	—	—	—	2	0·9
McC.	4	3	—	—	1	7	0·9
M.	1	—	—	—	—	2	0·8
L.	4	6	4	—	—	—	0·8
McD.	3	10	2	4	1	4	0·8
F.	2	—	—	—	2	3	0·8
W.	1	5	—	2	—	10	0·8
G.	4	—	—	—	—	2	0·8
T.	—	2	—	—	—	2	0·8
P.	4	3	—	—	—	1	0·7
McA.	4	1	2	6	1	1	0·7
M.	7	—	1	—	1	2	0·7
H.	8	—	6	—	—	6	0·7
A.	1	2	—	—	—	9	0·7
B.	1	9	—	—	—	10	0·7
B.	2	—	—	3	1	4	0·7
M.	1	—	—	—	—	4	0·7
K.	—	4	—	—	—	4	0·7
W.	3	—	—	—	1	4	0·5
A.	3	6	—	—	2	2	0·5
S.	1	5	—	1	1	—	0·5
G.	2	4	—	—	1	10	0·5

they showed low opsonic indices—indices well below normal in 20 out of 25 cases. These patients elected to have inoculations of tuberculin (T.R.) administered by this method and on Table XI. there is recorded the state of their opsonic indices after having undergone a period of not more than six weeks of such treatment. The chart also shows in each case the amount of tuberculin (T.R.) which they had received. These figures, we may say, were arrived at by taking an average of three consecutive readings, care being taken in making the estimation to avoid the negative phase. All other elements in the treatment having remained the same, the rise which had taken place in the

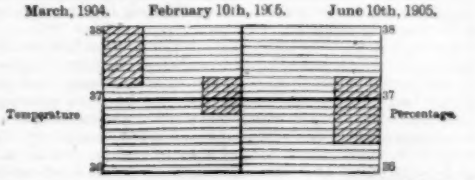
TABLE XI.—*Comparison of the Opsonic Indices of the Bloods of 23 Patients, taken after a Term of Sanatorium Treatment only, with those taken after a short Term of Sanatorium plus Tuberculin (T. R.) Inoculations Treatment.*

Initial.	O. I. before inoculation.	Doses given within a period of six weeks.	O. I. after inoculation.
S.	0·5	4 of $\frac{1}{2\cdot5\,0}$	1·5
P.	0·7	4 of $\frac{1}{2\cdot5\,0}$	1·3
McA.	0·7	4 of $\frac{1}{2\cdot5\,0}$	1·1
McD.	0·8	4 of $\frac{1}{2\cdot5\,0}$	1·0
W.	0·5	5 of $\frac{1}{2\cdot5\,0}$	1·1
A.*	0·5	1 of $\frac{1}{2\cdot5\,0}$, 1 of $\frac{1}{1\cdot2\,5\,0}$	0·8
M.	0·7	3 of $\frac{1}{2\cdot5\,0}$	1·3
B.	0·7	3 of $\frac{1}{1\cdot2\,5\,0}$	1·2
F.	0·8	3 of $\frac{1}{2\cdot5\,0}$, 1 of $\frac{1}{2\,5}$, 1 of $\frac{1}{2\cdot5\,0}$	1·3
A.	0·7	3 of $\frac{1}{2\cdot5\,0}$	1·2
L.	0·9	3 of $\frac{1}{1\cdot2\,5\,0}$	1·2
W.	0·8	1 of $\frac{1}{1\cdot2\,5\,0}$	1·1
K.	1·0	1 of $\frac{1}{1\cdot2\,5\,0}$	1·1
H.	0·9	3 of $\frac{1}{1\cdot2\,5\,0}$	1·4
B.	0·7	4 of $\frac{1}{2\cdot5\,0}$	1·3
M.	0·7	1 of $\frac{1}{1\cdot2\,5\,0}$, 1 of $\frac{1}{1\cdot2\,5\,0}$, 1 of $\frac{1}{1\cdot2\,5\,0}$	1·5
G.	0·5	4 of $\frac{1}{2\cdot5\,0}$, 1 of $\frac{1}{2\,5\,0}$	1·1
H.	0·7	2 of $\frac{1}{1\cdot2\,5\,0}$	1·0
G.	0·8	3 of $\frac{1}{1\cdot2\,5\,0}$	1·0
K.	0·7	4 of $\frac{1}{1\cdot2\,5\,0}$	1·3
McC.	0·9	3 of $\frac{1}{1\cdot2\,5\,0}$	1·4
T.	0·8	2 of $\frac{1}{2\,5\,0}$	1·2
M.	0·8	3 of $\frac{1}{2\,5\,0}$	1·4

* Spinal complication. Index eventually rose above 1·0.

supply of protective substances present in the serum which these higher indices point to can only be accounted for by inoculations given in this way we have a valuable agent by the action of the tuberculin. It is therefore plain that *in inoculations given in this way we have a valuable agent by means of which the resistance to, and therefore the power of combating, the disease can be raised to a higher level than is in many instances obtainable by sanatorial and climatic treatment alone.* Table XII. provides an example of a case successfully treated in this way in which recovery was eventually

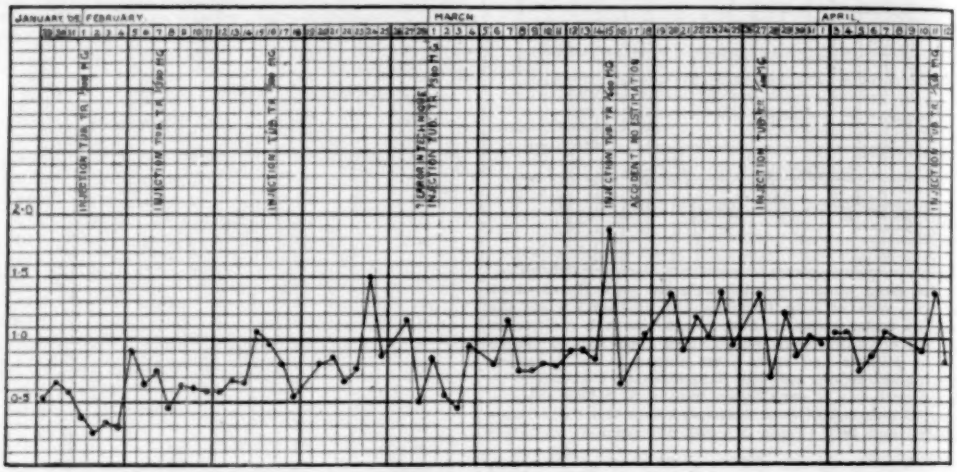
TABLE XII.—*This patient was a male, aged 26 years, suffering from three-lobed lesions (bilateral). The treatment was as follows: Sanatorium 11 months, climatic three years, and sanatorium inoculation four months.*



Weight ...	61.750 kilos.	65.800		68.800	4·5 per cent.
Hb.	78		90	100	11·1 ,,
R. B. C. ...	4,700,000	4,100,000		4,980,000	20·9 ,,
Opsonic index		0·86		1·46	6·9 ,,
Sputum, amount	Trace.	Trace.		0	—
T. B.... ...	Present in fair numbers.			0	—
Exercise ...	0	6 miles.		10 miles.	—
Physical signs ...	... ...			Occasional post-tussive crepitation remains in supra-clavicular area.	—

secured when the conditions had become to all appearances stationary after prolonged climatic and sanatorium treatment. Consideration of the opsonic curve of this case reveals two points of interest. Firstly (Table XIII.), it illustrates the method which is employed in order to raise gradually a patient's opsonic index. The period corresponding to the negative phase is jealously avoided, and a point slightly higher than the one at which inoculation last took place is

TABLE XIII.



H. G., aged 48 years; pulmonary tuberculosis.

successively selected for re-inoculations until a level is reached well above normal. Secondly, it illustrates the condition compatible with recovery—namely, not an index standing at a very high level but one standing slightly higher than is found in normal health and as is present in healthy persons, maintained steadily about that level. Eventually the oscillation has come to comparative rest in the vicinity of normal range. Thus there is established a condition of equilibrium in the vicinity of normal. The analogy between the behaviour of temperature curves in pulmonary tuberculosis and the behaviour of opsonic curves is thus sufficiently striking; both are most unstable during active disease and both alike return to a condition of stability with the falling away of the active signs.

Although the last table (No. XIV.) to which your attention is invited does not contain the record of work done by ourselves, the relationship between it and the subject with which we are concerned is so close that we feel no apology is necessary in using it.

During the whole of the period extending from 1890 to 1901 Trudeau of America employed inoculation treatment in cases of pulmonary tuberculosis. In the brief summary here presented he compares the results obtained by pure sanatorial measures with those in which the sanatorium treatment was supplemented by inoculations of tuberculin in some form. The deductions made from a body of work extending over 12 years and coming from so weighty a source merit the most careful perusal. The conclusion which this observer has arrived at is that the percentage of relapses in all classes of pulmonary tuberculosis in which tuberculin has been employed as a part of the treatment is very much smaller—for the exact figures we refer to Table XIV.—than where sanatorium measures alone have been relied on. Assuming the correctness of the observations made by Trudeau it seems that in those cases in which tuberculin was employed not only was the percentage of cures increased but the liability to relapse was diminished. Is the explanation not to be found in the fact that even handicapped as he was in the absence of the precise and scientific method to guide him in his work such as is to be found in systematic observations of the opsonic index, he succeeded by means of tuberculin inoculations in raising the resistance of the cases so treated to a higher level than was reached in those cases in which he depended entirely upon sanatorial measures of treatment? If that is so, then, there seems every likelihood that in the future by means of this line of treatment the clinician will obtain results which will prove to be superior to any which have been obtained in the past in the treatment of tubercular disease. That a high standard of protection can be obtained by the inoculation of tuberculin is claimed. How long the protection lasts we do not yet know. In patients who had been successfully treated by tuberculin inoculations whom we discharged six months ago and whose blood was re-examined a few weeks ago we found no appreciable falling away.

TABLE XIV.—*Trudeau's Results from 1890–1901.*

Cases treated (non-tuberculin).	Cases treated (tuberculin).	Advantage to tuberculin cases.
1367	143	—
Alive. 38 per cent.	Alive. 58 per cent.	20 per cent.
Dead. 39·6 per cent.	Dead. 33 per cent.	Balance untraced.
	Incipient cases only.	
Alive. 61 per cent.	Alive. 76·7 per cent.	15·7 per cent.

In concluding the report on the result of these investigations we gladly avail ourselves of the opportunity which the circumstance affords gratefully to acknowledge our sense of indebtedness to Dr. Wright for the privilege enjoyed of working for a time in St. Mary's Hospital Pathological Laboratory under his personal supervision and for much valued guidance and help received at his hands from time to time in connexion with our work.

Banchory.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon last, Sir James Crichton-Browne, F.R.S., treasurer and vice-president, being in the chair. The special thanks of the members were returned to Dr. Ludwig Mond, Ph.D., D.Sc., F.R.S., for his donation of £500 to the fund for the Promotion of Experimental Research at Low Temperatures. It was announced from the chair that the managers had elected Professor William Stirling, M.D., LL.D., D.Sc., Fullerian professor of physiology.

NOTES ON A CASE OF SYRINGOMYELIA.

BY ARTHUR D. KETCHEN, M.B. LOND.,
HONORARY VISITING PHYSICIAN, NEW SOMERSET HOSPITAL, CAPE TOWN.

As records of cases of syringomyelia with arthropathy are not very numerous it is thought that the following case may be of sufficient interest to warrant its publication.

The patient, a Portuguese male, aged 33 years, residing in Cape Colony, was admitted to St. Leger ward, New Somerset Hospital, Cape Town, on August 14th, 1905, complaining of a large swelling in the right shoulder-joint. The following history of the patient's illness was given. Four years ago he found that he was unable to hold anything in his left hand; objects which he tried to pick up he found himself unable to lift and anything which he tried to hold in his hand was not retained but was dropped. This weakness caused him to change his occupation from moulding, the wasting and loss of power at that time being attributed to lead poisoning. Two months before admission he awoke one morning feeling as if he had been beaten all over and noticed at the same time a swelling in his right shoulder-joint. This had gone on increasing rapidly in size but was almost quite painless. The patient had no history of syphilis. He was very temperate in his habits. There was no history of epilepsy and up to the attack four years ago he had always been healthy.

On admission the features of the case which immediately attracted attention were the very great swelling of the right shoulder-joint and the marked atrophy of the muscles of the left arm, forearm, and hand. Examination of the shoulder showed the joint to be greatly distended with fluid, the skin over the joint somewhat glossy and shining, and the superficial veins much dilated. Movement of the arm caused no pain in the joint. There was, however, very marked grating when the arm was moved. Movements of the joint were limited considerably, but this was apparently due to the effusion in the joint and not to atrophy of the muscles moving the arm. The circumference of the joint round the acromion and axilla measured 21 inches on the right side as compared with 14½ inches for the corresponding measurement of the left joint. There was no dislocation.

The nervous system.—On examination of the motor functions it was found that there was no loss of power except in the two upper limbs. In the left hand there was complete atrophy of all the intrinsic muscles, the hand presenting the form known as *main en griffe*. The abductor indicis and interossei on the dorsum were atrophied, and on the palmar surface both thenar and hypothenar eminences had entirely disappeared. No reaction was present in any of the muscles of the left hand, either to galvanic or faradic stimulation. The left forearm showed extensive atrophy of the flexor group of muscles in front, the patient being quite unable to flex his wrist. The extensors on the back of the arm were also atrophied but to a less degree than the flexors, some power of extending the wrist joint still remaining. The supinator longus, however, did not give evidence of any change and contractile power of the muscle as tested by resisting movements was good. No reaction of degeneration was present on testing this muscle. In the arm the biceps, brachialis anticus, and triceps showed well-marked signs of wasting but these muscles still showed a certain amount of contractile power and also contracted on stimulation by the faradic and galvanic current. The bulk of the left deltoid was good; its contractile power as far as could be judged was not much impaired. In the right hand the abductor indicis and interossei were atrophied and the hypothenar and thenar eminences were diminished in size but the patient was still able to grasp fairly well and the movement of opposition by the thumb still remained. The reaction of degeneration was present in the abductor indicis and interossei of the right hand. The muscle of the right arm and forearm showed no evidences of wasting. The following muscles of the trunk—viz., pectoralis major and minor, trapezius, supraspinatus, infraspinatus, rhomboidei, and a latissimus dorsi—were unaffected. Fibrillary tremors were present in the affected muscles.

Sensation.—On testing the sensory functions well-marked signs of dissociated anæsthesia were present on the upper limbs and trunk from the region supplied by the third cervical cord segment down to that supplied by the sixth dorsal cord segment. Over this region tactile sensation and muscular sense were normal. As regards temperature sense, this was entirely absent over the skin area supplied by the third cervical cord segments on the right side of the body. Over the remaining area, though the perception of heat and cold was very much impaired, it was not entirely abolished, the patient being able to distinguish heat when the water in the test-tube became nearly boiling. Cold over this same area was frequently called hot. Sensation to pain was distinctly blunted but not destroyed over the same area as that of disturbance of temperature sense—viz., from the third cervical cord segment to the sixth dorsal cord segment. The sensory functions over the rest of the body as regards pain, temperature, muscular sense, and tactile sensation were normal.

Reflexes.—Both knee-jerks were exaggerated. Ankle clonus and the extensor plantar reflex were absent on the right and left sides.

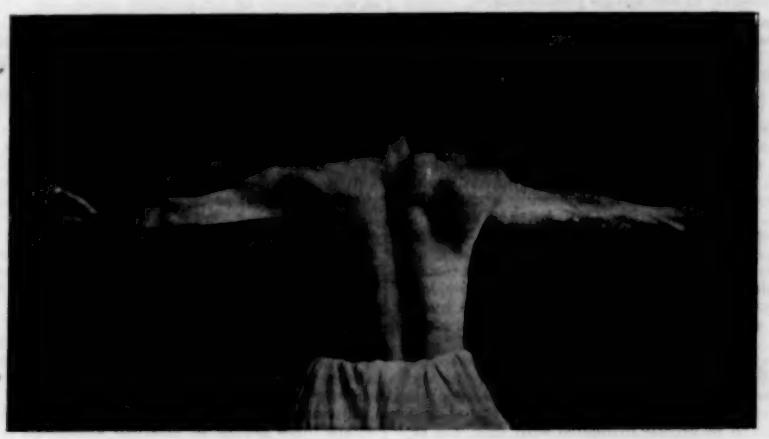
There was no interference with the functions of the bladder or rectum. Evidence of implication of the sympathetic nervous system was present, the pupils being unequal in size, that of the right eye being the larger. Both pupils reacted to light and accommodation. There were no signs of excessive sweating in the axillæ or upper part of the body. The cranial nerves were unaffected. Ophthalmoscopic examination of the eyes revealed no abnormal conditions. Examination of the spinal column showed no curvatures, either in a lateral or antero-posterior direction. Percussion of the spinal column elicited no tenderness, nor was pain, referred to the muscles or joints, a prominent feature of the case. Examination of the heart, lungs, and kidneys showed no evidence of disease. There were no trophic disturbances of the skin over the affected area.

The diagnosis of the case was made easy by the presence of the three groups of classical symptoms so characteristic of this disease—viz.: 1. Muscular atrophy beginning frequently in the abductor indicis and other intrinsic muscles of the hand, progressive in character and extending to other groups of muscles and to the opposite upper limb. 2. The presence of dissociated anæsthesia, the tactile and muscular sense being normal and pain and temperature sense much impaired. 3. Trophic changes, which in this case took the form of an arthropathy of the right shoulder-joint.

As the patient had worked with lead when the weakness of the left hand first made itself evident, four years before admission to hospital, the diagnosis of peripheral neuritis due to lead poisoning had been advanced, but this was negatived by (1) the character of the anæsthesia, both as regards its dissociation and also the fact that its distribution was in area that of a lesion of a *segment* of the cord and not that of a peripheral nerve; (2) the atrophy and paralysis being mainly of the flexor group of muscles and affecting the extensor group of muscles of the arm to a less degree; (3) the involvement of the left upper limb to a great extent before the right upper limb showed any signs of muscular wasting; (4) the exaggeration of the knee-jerks, &c. The well-marked sensory phenomena in the case excluded the diagnosis of amyotrophic lateral sclerosis or progressive muscular atrophy, two diseases characterised by progressive muscular wasting but no disturbances of sensation. The absence of severe pain in, and rigidity of, the neck muscles, together with the presence of dissociated anæsthesia and the trophic disturbance in the shoulder-joint, prevented the mistake of diagnosing the case as one of cervical pachymeningitis or of tumour of the cord. The distribution of the anæsthesia and muscular wasting showed that the lesion in the spinal cord extended over a considerable distance—namely, from the third cervical cord segment to the sixth dorsal cord segment.

Remarks.—Syringomyelia or gliosis spinalis as a pathological condition discovered in the spinal cord of bodies examined after death was first described by Etienne in 1546, but it was not till 1887 that Schultz and Kahler by identifying this pathological condition of the cord as the cause of certain clinical manifestations made the diagnosis of the disease possible during life. Since that time a considerable number of cases have been recorded, about 10 per cent. of which showed arthropathic changes, the shoulder being the joint most commonly affected. The pathological condition is essentially one of the presence of a cavity in the spinal cord of variable dimensions. The possible causes for the formation of these cavities are thus summarised by Starr in his admirable book on Organic Nervous Diseases; "First, from congenital defects of development; secondly, by a

disintegration subsequent to a neuroglia proliferation either of inflammatory origin or of spontaneous occurrence; thirdly, as the result of a retrograde metamorphosis of tissue the nutrition of which is impaired by obstruction to the circulation; fourthly, by actual destruction of the cord by hæmorrhage. The time has not yet come to establish conclusively any one of these views of the origin of syringomyelia."



Another point of great interest in syringomyelia is the dissociated anæsthesia; the presence of this symptom establishes clearly the fact that the various tracts conveying different kinds of sensation take different routes on entering the cord, the tract conveying the temperature sensations crossing over through the grey matter of the cord, and ascending in the antero-lateral tract of the opposite side. It is in its path across the cord therefore that the fibres of this tract are so liable to be involved by pressure from the cyst or central dilated canal.

The patient's present condition (Oct. 31st) is as follows. The effusion into the joint has increased greatly during the last two months, causing considerable pain on several occasions. The measurement of the joint is now 26 inches. Since admission it has been found necessary to aspirate the joint at short intervals, the total number of times this operation was performed being five. The amount of fluid withdrawn was as much as 25 ounces at one time; it was slightly blood-stained and of glairy sticky consistency. The relief afforded by aspiration was very temporary, the measurement of the joint within a day or two being as great as, or greater than, previously to the withdrawal of the fluid. There is no dislocation to be made out, but it would seem as if some of the fluid had forced its way into the cellular tissue outside the joint, distending the cellular tissue around. The photograph here reproduced shows well the progress which the joint has made since the admission of the patient to hospital. Movement of the arm is limited by the effusion into the joint. Pain has been present at varying intervals, sometimes lasting for four or five days at a time, but it cannot be said that this symptom has been prominent in the case. The patient, however, has felt throughout a great deal of mental depression.

The deltoid, supraspinatus, latissimus dorsi, and the pectoralis major on the left side are now showing signs of atrophy. They are diminished in bulk, fibrillary tremors are present, and the movements dependent on their contraction are lessened in power. The intrinsic muscles of the right hand show also progressive atrophy. There is still no affection of the gait or loss of power in the lower limbs. Sensation remains as before over the area supplied from the third cervical to the sixth dorsal cord segment, but on testing sensation over the lower limbs and trunk it is now found that the temperature sense is altered as regards the perception of cold, this being almost invariably called hot below the skin area supplied by the sixth dorsal cord segment. The temperature sense as regards heat, however, over this same area appears unimpaired nor is this area analgesic. The knee-jerks are markedly exaggerated. The pupils still remain unequal but react to light and to accommodation. There is now present a lateral spinal curvature with convexity to the left. The analgesia over the right shoulder-joint was well illustrated by the complete absence of pain caused by the puncture of the aspirating needle. The temperature has varied, rising not infrequently at night to 100·2° F., the highest record being 102·8°. Examination of the lungs revealed no pathological condition which would account for this rise, nor has there been any evidence of suppuration around, or in, the right shoulder-joint. The patient's general condition otherwise remains good and he is at present in hospital.

Cape Town.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF IRRITATION OF THE KIDNEY CAUSED BY UROTROPIN.

BY T. WILSON PARRY, M.D. CANTAB.

IT has frequently, I understand, been averred that the drug hexamethylenetetramine (urotropin) has no action of a detrimental nature upon the kidney. The following case appears to show that this assumption must not be too much relied upon.

On August 3rd, 1905, I was called to attend a man, aged 84 years, who was suffering from complete retention of urine. A brief examination served to show that this was due to an immensely enlarged prostate. Relief was speedily given by catheterisation and the urine drawn off was found to be foul-smelling, loaded with mucus, and alkaline in reaction; it had a specific gravity of 1012 and contained a trace of albumin. I immediately prescribed a five-grain dose of urotropin three times a day and as the patient appeared to tolerate this amount very well I increased it in a couple of days' time to double the quantity—namely, by giving the same dose every four hours in place of three times in the 24 hours. I also washed out the bladder daily with an antiseptic solution. The urine quickly lost its fœtor; it also became acid in reaction and the mucus disappeared. In about a week's time, as the state of the urine remained so much better, I reduced the amount of the drug to five grains every eight hours, but in two days' time, as the urine became slightly alkaline again, I was obliged to return to the four-hourly dose, after which the acidity immediately returned. Examination of the urine at this time on alternate days led me

to see that the albumin was steadily increasing in quantity. On August 26th it had risen to a fifth, 57 ounces being passed during the 24 hours. The specific gravity was still 1012. On Sept. 11th the albumin had again risen and now stood at a third, while the specific gravity had dropped to 1007, more urine (60 ounces) being passed in the 24 hours. Irritability of the bladder then occurred and continued in spite of large doses of hyoscyamus and buchu, and it became evident that the urotropin itself, clarifying in character as it had been to the contents of the bladder, was accountable for this by virtue of one of the products, formaldehyde, into which the urotropin had become decomposed. The urotropin was at once omitted and not only was there complete cessation of vesical irritation, but in 24 hours' time the albumin, instead of being one-third of the volume of the urine—the maximum which it reached—had become reduced to a mere trace as on August 3rd. This result appears to show that urotropin, if given for a sufficient time, may not only cause persistent vesical irritability even with an acid, normal-smelling, non-sedimentary urine, but in certain circumstances it may produce a nephritic irritation of a decidedly detrimental character.

The chemistry of this hydrolytic decomposition of urotropin into formaldehyde and an ammonium salt is easily demonstrable by a simple laboratory experiment. The interesting feature is that it can only take place in an acid medium. If an aqueous solution of urotropin be boiled with a little liquor potassæ no decomposition occurs, but if dilute sulphuric acid be substituted for the liquor potassæ and the liquid gently warmed formaldehyde, which is easily recognised by its penetrating odour, is generated. If the formaldehyde be completely eliminated by boiling and the acid liquid rendered alkaline with liquor potassæ and warmed, ammonia, the other product of the hydrolytic degradation of urotropin, is evolved and easily identified. In other words, urotropin, hexamethylenetetramine, $C_6H_{12}N_4$, is hydrolysed, under certain conditions, into the two substances from which it was originally derived. Equations 1 and 2 represent its formation and hydrolytic decomposition respectively:—

$$(1)\ 6\,CH_2O + 4\,NH_3 = C_6H_{12}N_4 + 6\,H_2O.$$
$$(2)\ C_6H_{12}N_4 + 6\,H_2O = 6\,CH_2O + 4\,NH_3.$$

As a rule, this process of splitting up urotropin into formaldehyde and ammonia presumably takes place in the bladder in an acid urine but from the observations made in this case it would appear in some circumstances to take place in the kidney or in the blood before it reaches this organ. This hypothesis, however, unfortunately involves an apparent inconsistency—namely, that the blood is not an acid medium—so that there is a temptation to conclude that at these times this hydrolytic process must take place in the kidney itself.

Crouch End-hill, N.

A CASE OF A SHARP FOREIGN BODY SWALLOWED AND SUBSEQUENTLY PASSED IN THE NATURAL MANNER.

By R. A. BELILIOS, M.D. EDIN., F.R.C.S. EDIN.

IN connexion with the article entitled "A Case of Perforation of the Duodenum by a Bodkin; Laparotomy; Recovery,"[1] the following notes of a case observed in my practice recently may be of interest.

The foreign body was a steel pin two inches in length, needle-pointed, with a small black glass knob. On the evening of June 21st last the patient, a woman, disturbed in some manner in the act of putting on a hat and having the pin between her lips, by a sudden inhalation drew the object to the back of her throat, whence it was instantly swallowed. On laryngoscopic examination no abrasion, &c., could be detected and for a time no discomfort was complained of. The patient was at once put on a diet of porridge and instructed to take a quantity of small pieces of uncoloured Berlin wool, at the same time rest being enjoined and a watch kept for symptoms. Purgatives and any excessive quantity of fluids were absolutely interdicted. It must be confessed that little of the wool was used by the patient but a considerable quantity of the oatmeal was taken for a few meals. Up to the morning of the 24th (two and a half days after the accident) there were no symptoms and then the patient began to complain of some vague gnawing pains in the hypogastric region. About six or eight hours after their onset she passed by the bowel some pieces of casts, five-eighths of an inch in diameter, which on microscopic examination were found to consist chiefly of mucus together with some changed blood. The fragments were about six inches in length. It was not possible to ascertain their exact number but probably about half a dozen were passed up to the morning of the 26th. The same evening (the 24th) the patient complained of pains, sharp and pricking in character, and localised to the region of the appendix. An examination, which for obvious reasons was very gently made, revealed, with the exception of slight tenderness in that particular region, nothing abnormal. The temperature, pulse, and general condition were quite correct throughout and there was never any reason for suspecting the onset of any inflammatory change. The pains in the lower regions of the abdomen continued and although never urgent were most marked through the night of the 25th. On the morning of the 26th, and to the great relief of the patient, the pin was passed in safety exactly four and a half days after the accident.

The points to which I would call attention in this particular case are: (1) the passage of the mucous casts, due presumably to certain changes in the glandular activity of the intestines owing to irritation of the foreign body, whereby the casts were formed and passed; and (2) the fact that purgatives and much fluid were absolutely forbidden and that instead a diet was prescribed which to my mind was calculated to travel with, and to some extent to form a sort of protective coating to, the needle-pointed foreign body in its course through the various curves of the intestinal canal.

Muswell-hill, N.

[1] THE LANCET, Nov. 25th, 1905, p. 1545.

A CASE OF CLAY-COLOURED STOOLS WITHOUT JAUNDICE BUT ATTENDED WITH COPIOUS BILIOUS VOMIT.

By W. GORDON, M.D. CANTAB., F.R.C.P. LOND.,
PHYSICIAN TO THE DEVON AND EXETER HOSPITAL.

IN 1889 the late Sir Andrew Clark communicated to the Royal Medical and Chirurgical Society for Dr. T. J. Walker a paper on the Significance of "Colourless" Stools without Jaundice, in which Dr. Walker described two cases of obstruction of the pancreatic duct where the stools were clay coloured, although the liver, bile-duct, and bile were found post mortem to be normal. Dr. Walker drew the conclusion that the formation of the colouring matter of the fæces depended on the mutual reaction of the bile and pancreatic fluid under the influences met with in the intestinal tract. He quoted Claude Bernard, who in 1856 wrote with reference to dogs whose pancreas had been destroyed: "It is remarkable that bile only colours the fæces a very bright yellow, whilst with the pancreatic juice the bile takes a very brown colour. The pancreatic juice therefore contributes indirectly to the colouring of the fæces." The conclusions of Dr. Walker have received less attention than might have fairly been expected. In his two cases, also, it will be observed that the presence of sufficient bile entering the bowel to colour the fæces was a matter of inference. On both these accounts, therefore, the following case, which I observed with Dr. C. J. Vlieland, should be of interest, not merely as supporting Dr. Walker's conclusion, but as demonstrating during life that an abundance of bile may enter the duodenum, yet, if the pancreatic juice is cut off from the intestine, stercobilin may be absent from the fæces.

Our patient was a middle-aged labouring man suffering from intense pain in the upper part of the abdomen, copious vomiting of green bile, and the passage of clay-coloured or, occasionally, pale cream-coloured motions. We diagnosed cancer of the pancreas, basing our opinion partly on Dr. Walker's observations. The vomit was of the ordinary olive-green colour produced by biliverdin and a large quantity of it was ejected. The motions were soft but formed, sometimes clay-coloured, as in cases of complete obstruction of the bile duct, sometimes faintly cream-coloured or primrose-coloured. They were never brown. At the necropsy Dr. Vlieland found a cancer involving the head of the pancreas and obliterating the pancreatic duct.

With regard to the colour of the motions, Mr. A. W. Mayo

Robson's suggestion that "the characteristic white stools that are often seen in pancreatic disease in the absence of jaundice owe their pale colour entirely to the solidification of the fat when the motions cool, although there may be a normal amount of bile present"[1] is, to my mind, incredible. The case which he quotes, one that had been under the care of Sir Lauder Brunton, so far from supporting his view, really supports Dr. Walker's, for an analysis of the fæces in that case by Dr. Sidney H. C. Martin showed unaltered biliverdin and only in small quantity. As a matter of fact, in our case Dr. Vlieland observed that the motions when passed were clay-coloured or sometimes cream-coloured, as I saw them, so that if "bile" were present it could not have been in the form of ordinary fæcal pigment. The curious cream colour or primrose colour was unlike anything I have seen in a case of biliary obstruction and may possibly have been due to a slight admixture with unaltered bilirubin.

Exeter.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Columnar-celled Carcinoma of the Testicle.—Giant Cells in Tumours of the Thyroid Gland.—Tuberculous Adenitis with Congenital Bronchiectasis and Cirrhosis of the Liver and Pancreas.—Spirochæta Pallida in Syphilis and in Yaws.—Note on the Fundus of the Eye from a case of Amaurotic Family Idiocy.—Stricture of the Duodenum.

A MEETING of this society was held on Dec. 5th, Dr. P. H. PYE-SMITH being in the chair.

Mr. A. G. R. FOULERTON read a paper on Carcinoma of the Testicle, pointing out that it was probable that in the past widely spread error had prevailed in connexion with the nomenclature of malignant disease of the testicle. Pathologists generally had recognised only two forms of malignant disease affecting the testicle, sarcoma and a carcinoma, which was usually described as being of a glandular spheroidal-celled type. Columnar-celled carcinoma of the gland had been described under that name in only a very few instances, but it was in the highest degree probable that many cases of this type of carcinoma had been described under other names—as cases of sarcoma, cystic sarcoma, adeno-sarcoma, chondro-sarcoma, and so on. Schlagenhaufer's position in classifying this form of growth as a malignant teratoma was referred to and reasons for dissenting from his views were given. A description of the histology of a case of columnar carcinoma of the testicle, the third which Mr. Foulerton had recorded, was given. The development of hyaline cartilage on the mesoblastic connective stroma of cases of columnar-celled sarcoma of the testicle was then referred to and explained as the result of a bio-chemical stimulus caused by a specific secretion of the epithelial cells of the new growth.—Mr. S. G. SHATTOCK said that the question raised by Mr. Foulerton's paper was a large one and he was much impressed with Schlagenhaufer's view in classifying this form of growth as a malignant teratoma. He thought that the statement made by Mr. Foulerton, who denied that malignant teratomata of the testicle occurred, was unjustifiable. The metastasis of growths containing cartilage was difficult of explanation, but to say that it was the result of specific stimulus on epithelial cells did not throw any light on the question.

Mr. S. MAYNARD SMITH read a paper on Giant Cells in Tumours of the Thyroid Gland. He showed sections of a tumour containing giant cells which had been removed from a woman aged 51 years. Clinically the tumour had the characteristics of a malignant growth. After the operation she had improved for a time but an extensive local recurrence soon took place and she died with metastatic deposits in the lungs and intestines. The tumour at its lower part was chiefly composed of fibrous tissue but at its upper part it had the appearance of a rapidly growing sarcoma. The giant cells were of two types: (1) multinucleated cells with protoplasm and nuclei closely resembling those of the surrounding sarcomatous tissue; and (2) cells which differed markedly from the first variety. The protoplasm had a greater affinity for eosin; the nuclei were smaller, more numerous, better defined, and more deeply staining, whilst the reticular appearance was less marked. There were also frequent cell inclusions in the cells of this type. In many places they were arranged along the line of the blood-vessels and here and there formed their walls. The condition was one of great rarity. A case had been recorded by P. L. Daniel; the general characteristics were strikingly similar to those of the sections he had just described. Gatti and Wölfler also had published cases in which they mentioned that the tumour was a sarcoma containing round, spindle, and giant cells. In both of these cases there were metastatic deposits found after death. As to the origin of these giant cells the following suggestions might be made: 1. That they were entangled thyroid vesicles, the protoplasm of the cells had disintegrated, and the nuclei remained imbedded in a mass of colloid and degenerated epithelium. From an examination of the specimen it seemed clear that this suggestion was incorrect. 2. That they were inflammatory in origin. In the specimen shown there was no evidence of inflammation around the giant cells. 3. That they were giant cells of new formation resembling the myeloid cells found in tumours of bone. 4. That they were analogous to the syncytial masses which he had seen in a malignant teratoid tumour of the testis.

Dr. J. GRAHAM FORBES read an account of a case of Tuberculosis of the Tonsils and Lymphatic Glands together with Congenital Bronchiectasis of both Lungs, Cirrhosis of the Liver and Pancreas, and also showed Microscopical Sections of the Affected Organs. The patient was aged two years and two months. For ten days there were swellings in the neck and enlargement of the abdomen. On admission to hospital there was marked swelling of the cervical, post-auricular, axillary, and inguinal glands. The tonsils were swollen and ulcerated. No sign of a disease in the heart or lungs was detected. There was marked increase in the size of the liver extending down to the umbilicus. The spleen was also somewhat enlarged. The blood examination showed some anæmia and considerable polymorphonuclear leucocytosis. The child had slight rickets but showed no evidence of congenital syphilis nor could any history of syphilis be obtained from the parents. The tonsils were removed and showed on microscopical examination typical tubercles. The temperature was raised irregularly. Diarrhœa and vomiting occurred. The glands diminished in size but the condition of the abdomen remained the same. Death occurred after six weeks in hospital. At the necropsy there was found tuberculosis of the cervical, mediastinal, bronchial, and mesenteric glands, congenital bronchiectasis of both lungs, and well-marked honeycomb appearance. The liver was much enlarged and weighed 34½ ounces, fairly smooth surface, thickened capsule, greenish-white in colour, with extensive fibrosis on section. The pancreas showed similar cirrhotic changes. The microscopical appearances of the affected organs were then described and showed that the tuberculosis was limited to the lymphatic glands, there being no trace of tubercle in the cirrhotic liver and pancreas and bronchiectatic lungs. Particulars were given of the frequency of cirrhosis of the liver in children and its association with tuberculosis from 5500 post-mortem records at the Hospital for Sick Children, Great Ormond-street. Reports of 40 cases of cirrhosis of the liver were found. Of these, six were associated with tuberculosis of other organs, 13 were attributed to the influence of congenital syphilis, two to the effects of alcohol, eight were assigned to other causes, and in the remaining 11 no exciting cause could be found. Dr. Forbes then referred to the occurrence of a total of 33 cases of acquired and congenital bronchiectasis out of all the post-mortem records of the Hospital for Sick Children. In six only the lungs showed peculiar honeycomb appearance, three being true congenital bronchiectasis and three associated with tubercle. He described the development of the lungs, and concluded by attributing congenital bronchiectasis to arrest of development, primarily, or to the influence of intra-uterine disease or syphilis, secondarily.

Dr. J. O. WAKELIN BARRATT exhibited (1) a Smear from a Hard Sore showing Spirochæta Pallida of Schaudinn and Hofmann and (2) a Smear from an Unbroken Yaw prepared by Dr. Aldo Castellani, also showing spirochætæ indistinguishable from spirochæta pallida. These spirochætæ have now been found by Dr. Castellani in 11 out of 14 cases of yaws. In unbroken yaws the form spirochæta

[1] Hunterian Lectures on the Pathology and Surgery of Certain Diseases of the Pancreas, THE LANCET, March 19th, 1904, p. 776.

pallida occurs alone; in broken lesions spirochætæ resembling spirochæta refringens and intermediate forms also occur.—Dr. S. A. POWELL said that he had no doubt that yaws and syphilis were two distinct diseases and mentioned the occurrence of an epidemic of yaws in Assam. After leaving Assam he was for five years in Bombay and had never seen a case of yaws there. He had on one occasion seen yaws and syphilis present in the same subject. Yaws was never hereditary but was readily produced by the inoculation of a sore or scratch.—Dr. FORBES said that he had seen a considerable number of cases of yaws in East Africa and confirmed the opinion expressed by the last speaker that yaws and syphilis were distinct diseases. He had seen parents contract yaws from their own children. The most similar feature in the two diseases was that in both the bones became affected. Yaws did not yield to antisyphilitic treatment.

Dr. F. J. POYNTON demonstrated the Fundus of an Eye from a case of Amaurotic Family Idiocy. He showed that the appearance of the spot in the centre of the macula was due to extreme thinning or complete atrophy of the retina in the centre of the yellow spot, so that the red reflex of the choroid appeared through, whilst the pale area around was due to œdema of the retina.

Dr. H. WILLOUGHBY GARDNER showed a specimen of Stricture of the Duodenum, apparently about the position of the opening of the bile-duct. The lumen of the bowel was not completely obliterated; it admitted a probe of about 2·5 millimetres diameter. The duodenum above the stricture was dilated and hypertrophied.

LIVERPOOL MEDICAL INSTITUTION.

Friedreich's Ataxia.—Massage and Exercise Treatment.—Exploratory Puncture of the Chest.—Internal Derangement of the Knee-joint.

A MEETING of this society was held on Nov. 30th, Dr. G. C. WALKER, Vice-President, being in the chair.

Dr. J. LLOYD ROBERTS showed two cases of Friedreich's Ataxia occurring in a brother and sister, aged respectively 16 and 23 years. The patients were two of a family of seven children, the girl being the third and the boy the fifth child. The remaining children were healthy and no relatives, so far as could be ascertained, had ever suffered from any disease similar to theirs. The parents were alive and healthy; there was no blood relationship between them. In both cases the symptoms of ataxia were pronounced, being more marked in the girl, in whom the symptoms had been noticed six years ago, the weakness and ataxia first appearing in the upper limbs. She was now scarcely able to walk without assistance and her speech was markedly affected. There were no ocular abnormalities. About six months ago her brother complained of weakness and unsteadiness of his legs; he was now unable to walk in a straight line, constantly swaying to one side or the other. He had slight nystagmus in both eyes but this was not constant and only occurred when the eyes were moved to the extreme right or left; the pupils were equal, somewhat dilated, and reacted to light.

Dr. W. H. BROAD read a note upon Massage and Exercise Treatment. After mentioning the various methods employed—manual, mechanical, and massage—he described several of Dr. Zander's "exercise machines," saying he had obtained the greatest possible benefit from a combination of mechanical and manual exercises. A *résumé* of six months' hospital work was given, during which period there had been 1071 attendances, including cases of scoliosis, wry-neck, flat-foot, stiff joints, ruptured muscles, rheumatoid arthritis, &c. Dr. Broad especially emphasised the very great value of early systematic manipulations to the muscles and joints of a limb the bones of which had been fractured, in which class of case he considered the early employment of massage to be a surgical obligation.

Dr. HUBERT ARMSTRONG read a note on a Possible Danger in Exploratory Puncture of the Chest. He illustrated his remarks by the case of a girl, aged two years and nine months, whose chest he had explored with the view of excluding empyema, the physical signs being those of chronic interstitial pneumonia. The puncture was followed by hæmoptysis and sudden alarming collapse from which the patient, unlike others which were cited from recent literature, recovered. Dr. Armstrong drew attention to the danger of syncope, especially in children, when the needle entered a lung in a state of chronic inflammation, and added some remarks upon the pathology and treatment of this distressing, if rare, accident.

Mr. W. THELWALL THOMAS read a paper on Internal Derangement of the Knee-joint, including in that phrase all the conditions which cause locking of the joint. These were classified as follows: (1) fracture and displacement of semilunar cartilages; (2) fracture of portions of the femoral condyles; (3) loose bodies; (4) synovial fringes; and (5) other rare conditions. After considering the movements of the knee-joint, the causes and accidents which led to "locking" were described. In a series of 44 cases the semilunar cartilages were found at fault in 28, the internal cartilage being damaged in 25, and the external cartilage in three. Of the internal cartilage, longitudinal fracture, partial or complete, was found in 18 cases; total separation of the circumference in one case; and partial separation of the anterior third in six cases. Of the external semilunar cartilage (three cases), separation of the anterior third was seen. In no case was the fibrous extremity of either cartilage damaged. Three cases of fracture of the femoral condyles were described. The differential diagnosis of these several lesions was considered at some length. Treatment was discussed under the headings palliative and radical. In the treatment of the initial synovitis Mr. Thomas insisted upon absolute rest, with the application of a posterior splint specially padded at the popliteal space, together with firm pressure over the knee. He urged the uselessness of continuing with supports of any kind when recurrent locking took place, and strongly advocated operation when the occupation of the patient demanded much strain upon the joint. At the operation he always removed the offending portion of the semilunar cartilage or fringe and allowed movement of the joint ten days later. The material used for suturing the synovial membrane and capsule of the joint was chromicised reindeer tendon.—Mr. RUSHTON PARKER agreed that stitching of the damaged cartilage was seldom practicable and when so not worth while. He had only done so in one case; in all the rest he had cut the torn portion away.—Mr. ROBERT JONES stated he had operated upon 23 cases this year. In two the injury was to the external and in 21 to the internal cartilage. When the protrusion could be felt from the outside it favoured the diagnosis of displaced synovial fringe rather than damaged cartilage.—Mr. DAMER HARRISSON, Mr. GEORGE G. HAMILTON, Mr. G. P. NEWBOLT, and Mr. E. M. STOCKDALE, also spoke.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Nov. 29th, Mr. W. B. Holderness, the President, being in the chair.—Dr. E. S. Norris exhibited a specimen of Hæmorrhagic Pancreatitis. The patient, who was a married woman, aged 67 years, and very fat, was admitted to the Windsor Royal Infirmary on account of acute abdominal pain. She had suffered 15 years ago from pain ascribed to gall-stones. The present attack had commenced suddenly 36 hours before admission. Her temperature was subnormal and her pulse was 130 per minute, running and thin. There was slight albuminuria, her bowels were confined, and there was some icterus of the conjunctivæ. Death took place on Nov. 15th, being preceded by symptoms of collapse, vomiting of blood, and a rise of temperature to 101° F. At the necropsy the abdominal wall was found to contain a layer of six inches of fat and on opening the peritoneum a quantity of blood-stained serum escaped. The omentum was covered with small areas of fat necrosis. The pancreas was swollen and very hard. On section it showed a uniform purple colour. The liver was enlarged and somewhat fatty. The gall-bladder was distended but no gall-stones were found. The kidneys were somewhat granular. There were thickening around the bile-ducts and some catarrh of the duodenum around the papilla. The fluid collected from the bile-duct, the duct of Wirsung, and from all the smaller pancreatic ducts, even at the tail of the gland, reacted most definitely to the ordinary tests for bile.—Mr. E. Weaver Adams read notes of a case in which oil was passed from the rectum. The patient was a married man, aged 48 years, holding a responsible position which entailed a good deal of anxiety. The symptoms dated from the end of February, 1904. After some exposure to cold about that time he was laid up with "a chill" from which he gradually got better. In October he presented himself suffering from vague symptoms of indigestion. By Nov. 12th these had become more

pronounced and included much pain referred to the region of the navel, together with flatulence, general debility, colicky pains, and constipation. In the early summer of 1905 diarrhœa set in which became worse in August. The stools, which were very pale, then consisted of undigested food and were very offensive. There was also present in the motions a peculiar matter which eventually proved to be fat. Sometimes it took the form of liquid drops and sometimes that of solid lumps like butter. This symptom continued in spite of treatment, though some benefit was derived from an alkaline carminative containing sulphocarbolate of soda and liquor bismuthi. The patient, however, continued to lose weight, though artificial digestives diminished this symptom to some extent. In October laparotomy was performed by Mr. J. Bland-Sutton who found that the pancreas was of a stony hardness, apparently due to interstitial inflammation. Mr. Adams said that the symptoms certainly pointed to chronic pancreatitis. The colourless stools were very suggestive, as also was the steatorrhœa, though this symptom did not always mean disease of the pancreas, as he had witnessed it in underfed children taking large doses of cod liver oil as well as in other cases.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Nov. 24th, Dr. Robinson being in the chair.—The following cases, pathological specimens, &c., were shown:—Dr. J. B. Hellier: (1) Ectopic Fœtus with Sac, &c.; (2) Large Myoma removed by Hysterectomy; (3) Uterus removed for Myoma and Pregnancy; and (4) a New Pelvimeter (Solowij).—Dr. A. Bronner: (1) Hartmann's Tonsil Crusher (flap); and (2) Frames for Use in Progressive Myopia.—Mr. E. Ward: Case of Sarcoma of the Scalp; there was marked present improvement after treatment by the x rays.—Mr. H. J. Roper: Epithelioma growing from a Pigmented Mole on the Chest in a man, aged 75 years.—Dr. T. Churton, with Mr. W. H. Brown: A case of Jejuno-colic Fistula.—Mr. J. Basil Hall: A Fœtus removed by Laparotomy after being Encysted in the Abdomen for 20 years.—Dr. E. F. Trevelyan: (1) Case of Dementia Præcox in a girl, aged 17 years, of five years' duration; (2) case of General Paralysis in a Woman; (3) Unusual case of Laryngeal Phthisis; and (4) Lungs and Testis from a case of Terminal Tuberculous Meningitis.—Dr. T. Wardrop Griffith: An Advanced case of Pseudo-hypertrophic Muscular Paralysis.—Professor A. S. F. Grünbaum: A Large Pacchionian Body.—Mr. H. Littlewood: (1) Partial Gastrectomy for Malignant Disease (patient and specimen); (2) Malignant Disease of the Uterus; (3) Vermiform Appendix containing a Collection of Pus adherent to Fallopian Tube and Bladder; and (4) Malignant Disease of the Cæcum and Ascending Colon (patient and specimen).—Dr. A. G. Barrs: Case of Supraclavicular Adenopathy.—Mr. B. G. A. Moynihan: Specimens and cases of Partial Gastrectomy.—Dr. Carlton Oldfield: A specimen of Ruptured Aneurysm of the Abdominal Aorta.—Mr. Moynihan read a paper on the Surgical Treatment of Cancer of the Stomach. He referred to the association of ulcer and cancer, to the question of early diagnosis, and discussed at length the details of the technique of the operation of partial gastrectomy. Referring to the lymphatic distribution in the stomach, he pointed out that with the present methods of treatment of cancer, wherever occurring, the surgical essentials were removal of the whole of the primary growth, removal of the lymphatic vessels draining the area in which the growth occurred, removal of the glands into which the vessels drained, and, finally, removal of the tissues in which these glands were buried. This principle carried out in the case of growths of the pylorus involved in all cases, early or late, the entire removal of the lesser curvature to a point about from one and a half to two inches beyond the limits of the palpable growth, the upper part of the gastrocolic omentum, and the first part of the duodenum. The steps of the operation were illustrated by lantern slides.—The paper was discussed by Dr. Barrs, Dr. J. Gordon Black, Professor Grünbaum, Dr. Trevelyan, Dr. Clark, Mr. J. Stewart, Mr. E. Solly, Dr. Robinson, Mr. Basil Hall, Mr. R. Lawford Knaggs, Mr. J. F. Dobson, and Mr. Collinson.—Mr. Moynihan replied.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting of this society was held at St. Bartholomew's Hospital, London, on Nov. 24th, Professor J. Symington, F.R.S., the President, being in the chair.—Mr. S. Scott showed photographs of Sections of the Thorax.—The President was authorised to sign the agreement, a copy of which had been circulated to the members, proposed between the editors of the *Journal of Anatomy and Physiology* and the members of the Anatomical Society.—Mr. J. W. Thomson Walker introduced a discussion on the Surgical Anatomy of the Prostate. He said that the ready stripping of the sheath of the prostate was an important point in the operations of perineal and suprapubic prostatectomy. For the suprapubic operation certain changes were necessary in the base of the bladder. The sphincter was dilated by the protrusion of a nodule of prostate into the bladder and the finger could thus be pushed through the lumen of the sphincter and need not penetrate through the muscle of the floor of the bladder. The striped muscle in relation to the prostate formed a ring surrounding the urethra at the apex of the gland. Thence it passed up beneath the anterior layer of the sheath as far as the bladder wall. This striped muscle probably played an important rôle in retaining the urine after suprapubic prostatectomy. The prostatic urethra was vertical and straight at its supramontanal part but below the verumontanum it curved forward. The prostatic urethra was removed with the prostate in the majority of cases of suprapubic prostatectomy without causing any change in the sensory part of the reflex act of micturition.—A discussion followed in which Mr. Cuthbert Wallace, Dr. Daniel, Dr. Keith, and the President took part.—Professor J. T. Wilson read a paper on the Anatomy of the Calamus Region in the Human Bulb and gave an account of a hitherto unrecorded "nucleus postremus."—The President showed specimens illustrating the Topographical Anatomy of the Caput Gyri Hippocampi. He showed how that, in his opinion, a hollow, described as a special sulcus by Retzius, was nothing more nor less than a depression caused by the tentorium cerebelli.—Mr. F. G. PARSONS read Notes on the Coronal Suture and showed by many specimens from different mammalian orders that the forward projection of the anterior inferior angle of the parietal bone was correlated to the retracting action of the temporal muscle on the lower jaw.—Professor A. M. Paterson, on behalf of himself and Dr. Emrys Roberts, demonstrated the conditions of the vertebral column, ribs, sternum, and thoracic cavity in an example of ectopia of the heart and viscera and discussed the bearing of these conditions on the question of the development and morphology of the sternum.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on Dec. 1st, Dr. E. Willett, the President, being in the chair.—Mr. J. H. Chaldecott read a paper on the Evolution of Ethyl Chloride, its Uses and Abuses. He regarded ethyl chloride as an invaluable agent in "single-dose" cases—e.g., removal of tonsils and adenoids. He pointed out the serious mortality of these cases under chloroform and the disadvantage of "gas and ether" for this class of case. He regarded "gas" and ethyl chloride together as better than either of them alone, the combination producing less rigidity and less after-effects. Mr. Chaldecott deprecated the use of ethyl chloride for any case where nitrous oxide anæsthesia was sufficient. He emphasised the fact that ethyl chloride was not the absolutely safe drug that it is made out to be by many non-professional persons, referring to 30 collected deaths in the recent literature; nor did he think ethyl chloride followed by ether as safe as "gas and ether." For cases requiring an anæsthesia of about two minutes he regarded it as the ideal anæsthetic.—Dr. J. F. Silk commented on the value of ethyl chloride given from a Skinner's mask preceding the administration of the A.C.E. mixture. He thought rigidity from ethyl chloride of no importance.—Mr. C. Carter Braine regarded rigidity as sometimes dangerous, quoting a case in support of his argument. He had discarded nitrous oxide before ether in favour of ethyl chloride. He gave ethyl chloride for about 40 seconds, then changing to the ether inhaler.—Mr. A. H. Brewer highly approved of ethyl chloride in adenoid cases.—Dr. R. J. Probyn-Williams pointed to the difficulty of teaching students how to determine the presence of ethyl chloride anæsthesia.—Dr. G. A. H. Burton thought that rigidity occurred but was transient. He was wont to precede chloroform by first about two drachms of C.E. mixture and then five cubic centimetres of ethyl chloride, both drugs being given from a Skinner's mask.—Mr. L. Kirkby Thomas gave C.E. mixture in a small Clover's inhaler with the bag off and preceded it by ethyl chloride.—Mr. A. de Prenderville described a method of giving ethyl chloride gradually in fractional doses.—Dr. J. Blumfeld

had no doubt about the frequency of even extreme muscular spasm with ethyl chloride. In the laboratory the drug had been shown to be lethal by respiratory paralysis with inspiratory spasm; clinically it appeared to be dangerous through circulatory failure.—Dr. A. B. Kingsford differentiated two kinds of rigidity—that which came on early and was of no moment and a later variety that was due to want of oxygen. He found ethyl chloride useful in the course of ether administration when there was straining.—Mr. Chaldecott replied.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Dec. 1st, Mr. W. Campbell M'Donnell, the President, being in the chair.—Dr. C. H. Roberts read a paper on Uterine Cancer: some Points in its Pathology and Treatment. He said that cervical cancer occurred mostly at the climacteric in parous women and was rare in young people. Erosions and lacerations of the cervix might cause cancer owing to the proliferating glands becoming malignant. Clinically, squamous cancer of the cervix was the common type and was often met with as a growth into the vagina. It tended to limit itself and not to invade deeper structures, so it was more favourable for operation than the glandular type, which was more difficult to deal with as it was usually far advanced before it was recognised. The symptoms of cancer of the cervix were hæmorrhage, pain, wasting, and discharge which, if profuse, usually meant a large mass of growth. The cause of death was generally some complication, and the average duration of life after recognition was about 18 months. Cancer of the cervix as a complication of pregnancy was very difficult to deal with owing to the obstruction, and the modern trend was to operate by the abdominal route. If cancer of the cervix was operable probably the best thing was to remove the whole uterus. Vaginal hysterectomy was a good operation and the immediate results were good. Abdominal hysterectomy was a new operation introduced by Wertheim for those extensive and advanced cases hitherto considered inoperable. The technique of the operation was fully described. Cancer of the body of the uterus was an old-age disease and most of the patients were nulliparous. The type was usually glandular. Cancer and fibroids when met with together were usually coexistent, but there was such a thing as development of cancer in fibroids. Syncytioma malignum, previously termed deciduoma malignum, was practically a carcinoma, but grew from fœtal elements retained in the uterus after the death of the ovum. It was a very serious disease and was often rapidly fatal. To get favourable operative results in cancer of the uterus early diagnosis was urged, this being obtained by early examination of all cases of irregular bleeding occurring in women at any age. The paper was fully illustrated by many beautiful microscopic slides and drawings.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—The ordinary meeting of this society took place on Dec. 4th, Dr. Thomas Barr, the President, being in the chair.—The President, in the course of a valedictory address, dwelt upon the valuable work being carried out by the society in the ever-growing field of otological research, and expressed a hope that the formation of a museum and the perfection of certain schemes before the council would further promote such useful objects.—In a short paper on the Prevention of Ear Affections due to Loud Noises and Explosives Mr. Arthur H. Cheatle called the attention of the authorities to the enormous number of cases occurring in the navy from such causes. It was a matter of grave importance and had already engaged the attention of the Japanese.——At the annual general meeting of the society, which was held on the same day, the following gentlemen were elected officers and members of council for the ensuing session, 1905-06:—President: Mr. A. E. Cumberbatch. Vice-Presidents: Mr. C. A. Ballance, Dr. Adolph Bronner, and Mr. R. H. Woods. Honorary treasurer: Dr. Edward Law. Honorary librarian: Mr. Richard Lake. Honorary editor of the Transactions: Dr. W. Jobson Horne. Honorary secretaries: Mr. P. Macleod Yearsley and Mr. Henry Secker Walker.—Mr. Macleod Yearsley was appointed the official delegate of the society at the International Medical Congres at Lisbon.—The annual dinner was held in the evening at the Trocadéro, the retiring President, Dr. Barr, presiding over a company consisting of 80 members and guests. Among those present were Sir Lauder Brunton, Mr. John Tweedy, Professor Thorburn, Professor Lermoyez (Paris), and Sir Felix Semon. "The Society" was proposed by Professor Thorburn, "The Guests" by Dr. J. B. Ball, and Mr. Tweedy and Professor Lermoyez responded to the latter toast.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 1st, Mr. L. A. Bidwell, the President, being in the chair.—Dr. S. A. Bontor read a paper on Jamaica as a Health Resort. He remarked that in point of interest it would be hard to find a more suitable place as the scenery was difficult to surpass anywhere, while the native population, to one who did not know them, formed an additional source of interest. As to climate this left little to be desired, for the island was so mountainous that a very great variety could be obtained, while in many parts a very equable temperature could be enjoyed for a great part of the year.—Dr. Bontor's paper was followed by an instructive survey of some of the continental health resorts by Dr. W. S. Colman who said that the most important features of these resorts were that they were in beautiful surroundings, everything was done that was possible to make the treatment impressive and so to influence the patient on the mental side as well as on the physical, while the comforts of the friends were also thought of by the satisfactory amusements provided both for them and the patients with them. At the same time the invalid was subjected to a regimen which in the new surroundings he was willing to follow because it was the fashion and was therefore often much better controlled than could possibly be the case at home. In addition to these advantages the influence of the waters of the different spas, if one suitable to the particular case was chosen, was undoubtedly beneficial. Both the papers were illustrated by lantern slides and an interesting discussion followed.

Reviews and Notices of Books.

Les Actualités Médicales: 1. *Technique de l'Exploration du Tube Digestif.* Par le Dr. RENÉ GAULTIER, ancien interne lauréat des Hôpitaux de Paris. Avec 13 figures. Pp. 96. 2. *Trachéobronchoscopie et Œsophagoscopie.* Par le Dr. GUISEZ, ancien interne et assistant adjoint d'otologie des Hôpitaux de Paris. Avec 20 figures. Pp. 96. Paris: Librairie J. B. Baillière et Fils. Price 1.50 francs per volume.

THESE two volumes belong to a series of small brochures on special subjects of medical or surgical interest entitled, "Les Actualités Médicales." The first is a useful little work containing within a very small compass a considerable amount of valuable information. The author has studied clinical methods under the direction of some of the most eminent French clinicians, among others, M. Robin, M. Dieulafoy, and M. Lancereaux, and acknowledges his indebtedness to them. The work consists of an introduction, in which the scope and relations of gastro-intestinal diseases are briefly outlined, and of two main divisions, the first dealing with clinical and laboratory methods as applied to the investigation of the diseases of the stomach and intestines, while the second deals with the application of the information obtained by these methods to special instances of gastric and intestinal diseases. The first part is a thoroughly practical account of the methods of investigating the various symptoms and physical signs associated with these diseases and is subdivided into clinical methods and laboratory methods. The latter section might with great advantage be studied in this country where practitioners as a rule neglect entirely these methods of investigation. On the whole, we are disposed to agree with Dr. Gaultier when he states that it is at least as necessary to know how to interpret an examination of the gastric juice or an analysis of the fæces as to be able to read the results of an analysis of the urine or a blood count. The accounts given of test meals and of the chemical investigation of the gastric contents are clear and concise. Dr. Gaultier is also of opinion that an examination of the fæces is of equal value in intestinal disease to that of test meals in affections of the stomach and he gives details of methods which

he has devised. His test meal for purposes of fæcal examination consists of 100 grammes of white bread, 60 grammes of beef, 30 grammes of butter, 500 grammes of milk, and 100 grammes of potatoes. To delimit the fæces corresponding to this he gives three cachets containing powdered carmine, one at the beginning, one during, and a third at the end of the meal. He devotes a considerable part of his book to the results of investigation of such a meal. In spite of its brevity the book is well written and we can cordially commend it.

The other volume is interesting, though of more specialised character. It deals with the application of endoscopic methods to the œsophagus, larynx, trachea, and bronchi. The history of this application and the methods employed are carefully and fully described and clearly illustrated. The indications for their employment and the information gained are described, the difficulties encountered are set forth, and the contra-indications are enumerated.

Hygiène et Pathologie Cutanées du Premier Age. (*The Hygiene and Pathology of the Skin in Infants.*) Par le Dr. PAUL GASTOU, ex-chef de clinique et assistant de consultation; chef de laboratoire de la Faculté à l'Hôpital Saint Louis. Avec 13 planches, 7 figures, et 1 tableau. (Extrait du tome second du "Traité d'Hygiène et de Pathologie du Nourrisson.") Paris: Octave Doin. 1905. Pp. 87. Price 4 francs.

THE child in the first year of life is exceptionally prone to cutaneous diseases and therefore a special study of the skin in infancy is well justified. This volume is a separate issue of a portion of a larger work devoted to the hygiene and pathology of infants, and dermatologists will be glad to have it in this form. This great tendency to cutaneous eruptions Dr. Gastou considers to be due to a special vulnerability of the skin in infants caused by the thinness of the epidermis and to the slight attachment between its several layers, so that the more superficial strata are readily detached and thus desquamation and bullæ are readily produced. The abundant blood-supply of the papillary layer also renders the derma very responsive to all forms of irritants. Heredity is also, in the opinion of the author, an important factor in the production of diseases of the skin in childhood. Apart from the chapter dealing with the general etiology of these diseases in early life, the author does not devote much space to the causes of skin lesions, probably because their etiology in childhood does not differ from that at other periods of life. The treatment is judicious and fairly fully described. The illustrations are all from photographs and are good.

A Practical Treatise on Diseases of the Skin for the Use of Students and Practitioners. By JAMES NEVINS HYDE, A.M., M.D., Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, Chicago; Dermatologist to the Presbyterian, Augustine, and Michael Reece Hospitals of Chicago; and Consulting Dermatologist to the Chicago Hospital for Women and Children; and FRANK HUGH MONTGOMERY, M.D., Associate Professor of Skin, Genito-urinary, and Venereal Diseases, Rush Medical College, Chicago; Professor of Skin and Venereal Diseases, Chicago Clinical School; Attending Physician for Skin and Venereal Diseases, St. Elizabeth Hospital, Chicago. Seventh and revised edition. Illustrated with 107 engravings and 34 plates in colours and monochrome. London: Henry Kimpton. 1905. Pp. 938. Price 25*s.* net.

THIS treatise on dermatology has been so long and so favourably known throughout English-speaking countries that it may seem almost superfluous to do more than to announce the issue of this, the seventh, edition, yet we may mention that as even the three years which have elapsed since the appearance of the sixth edition have made large additions to dermatology, both in the pathology of the diseases of the skin and in their therapeusis, and many alterations have been made, only a comparison of the two editions can show how great have been the changes. Several new morbid conditions of the skin have been described. The nomenclature of dermatology has always been the despair of those who know little of the subject and the names of these new diseases will only serve to enhance this feeling. The additions include granulosis rubra nasi, pyroplasmosis hominis, acrodermatitis perstans, and acrodermatitis chronica atrophicans. In the sections on treatment the employment of light and the x rays has been described and the estimates as to the value and efficacy of these therapeutic agents are judicious and moderate. To a large extent the book has been rewritten and it is now fully representative of the generally received views of the leading dermatologists. The illustrations are very good.

LIBRARY TABLE.

Practical Massage in Twenty Lessons. By HARTVIG NISSEN, Instructor and Lecturer in Massage and Gymnastics at Harvard University Summer School. With 46 original illustrations. Philadelphia: F. A. Davis Company. 1905. Pp. 168. Price $1 net.—During 30 years of experience as a masseur and teacher the author states that he has been constantly studying, practising, and broadening his views and ideas. He hopes that this book, which is the result of his life's work, will be found worthy of its title "Practical Massage" and be accepted as a practical help in the treatment of the sick. The author's method is a combination of what he has found to be the best and most useful manipulations and movements in other systems and of what he has found out himself by experience. In these lessons he considers massage together with such gymnastic exercises as are necessary in order to do the maximum of good for the patient. He pleads for a closer coöperation between the medical profession and the massage specialists, which he maintains is desirable and necessary in order to produce the best results. In the early chapters the movements for each part of the body are carefully explained, while in chapters from 12 to 20 the different diseases to which this treatment is applicable are considered and the particular movements for each are pointed out. The illustrations show clearly what is intended but their execution leaves something to be desired. The author has evidently taken much care in the production of this volume.

Contributions to Clinical Surgery. By JAMES CRAWFORD RENTON, M.D. Edin., F.F.P.S. Glasg., Surgeon and Lecturer on Clinical Surgery, Western Infirmary, Glasgow; Examiner in Surgery in the University of Aberdeen; formerly Examiner in Surgery and Clinical Surgery in the University of Edinburgh and Surgeon to the Glasgow Eye Infirmary. London and New York: Rebman. 1905. Pp. 192. Price 5*s.* net.—Nearly all the papers of which this book is composed have appeared previously in various medical journals, some of them in the columns of THE LANCET. The author has here gathered them together and they form very pleasant reading. They cover a wide area, for they range from miner's nystagmus to perforated gastric ulcer. In nearly every paper the author has something original to say. He approves highly of Roux's "staple" method of radical cure of femoral hernia. He has operated 25 times and in only one case was there any trouble, and in that case the patient fell downstairs and broke the staple. This was taken out except one part which was so firmly embedded in the bone that it could not be removed and a fresh staple was inserted. It is a method which deserves a more extensive trial than it has hitherto received. Dr. Renton tells us that he does not now fix the arm to the side after excision of the breast but bandages it at a right angle. This is certainly an

improvement as stiffness afterwards is avoided. It is still better not to fix the arm at all and the axilla and chest can be easily bandaged, leaving the arm quite free.

A Nurse's Guide for the Operating Room. By NICHOLAS SENN, M.D., Ph.D., LL.D., C.M., Professor of Surgery, Rush Medical College, in affiliation with the University of Chicago; Surgeon-in-Chief, St. Joseph's Hospital, &c. Second edition, enlarged and revised. Chicago, Illinois: W. T. Keener and Co. 1905. Pp. 204.—This guide is made up in great part of abstracts of lectures delivered by the author to the pupils of a nurses' training school. It describes, in the first place, the general duties of a surgical nurse, the preparation of an operating room in a private house, the prevention and treatment of hæmorrhage, the methods of saline infusion, and the preparations for operations and sterilisation, and in the second place the instruments and dressings required for various operations. Numerous illustrations are given and in this connexion we may mention that the trephines figured show the screw head in the middle of the handle, which is much in the way of the surgeon in prolonged use of the instruments; this arrangement is rarely employed in this country at the present time. For an operating room in a private house the author suggests the kitchen. In most English kitchens the light would be deficient; in our opinion an upper room is desirable, as usually possessing better light and being less likely to be overlooked. Moreover, there are advantages in having the operation performed in the room where the patient is to remain afterwards and this would hardly be possible in the kitchen. As the book is primarily intended for nurses, is there much use in defining an abscess as "a circumscribed cavity containing the fluid product of suppurative inflammation"? Among the requirements for the operation of perineorrhaphy is included a "gynecologic suit." We have searched the book in vain to discover what this is and we have not been able to find whether it is intended to be worn by the patient or the surgeon. The book is good and on the whole admirably adapted for the use of intelligent surgical nurses; indeed, many surgeons will be able to gather information and hints from its pages.

Heredity. By C. W. SALEEBY, M.D. Edin., Author of "The Cycle of Life," &c. London: T. C. and E. C. Jack. Pp. 116. Price 1*s.* net. *Organic Evolution.* Same author and publisher. Pp. 124. Price 1*s.* net.—These two little books, belonging to Jack's Scientific Series, may be conveniently considered together as they deal with such closely allied subjects; they are, indeed, clearly designed as mutually complementary volumes. It is not an easy undertaking to give an intelligible account of the theory of evolution as at present held or of the conflicting theories of heredity in a compass of some 100 pages, and working under such conditions the author must be held to have discharged his task with reasonable success. The reader who has not had a scientific or very logical training prefers a dose of dogma to the trouble of following a complicated train of reasoning and will probably appreciate the method here adopted more than a full and detailed discussion. We are inclined to regret the somewhat polemical tone which runs through the books and would rather leave the *odium theologicum* to its natural repositories in any such conflict as still exists between theology and science. However, the books form very readable introductions to the subjects dealt with; and if we cannot agree with all the author's views, or his mode of presenting them, we yet believe that the volumes before us are on the whole well adapted for popular needs.

JOURNALS AND MAGAZINES.

The Edinburgh Medical Journal.—To the November number of this magazine Dr. C. J. Lewis and Mr. A. Logan Turner contribute a careful report of some researches carried out to ascertain the bacteriological conditions prevailing in cases of suppuration in the accessory sinuses of the nose. They find that infection arises in the majority of cases from the nose and in a smaller number from the mouth; influenza plays an important part in initiating such conditions. Dr. F. J. Gray writes in praise of salicylate of iron in cases of erysipelas and of acute tonsillitis as well as in some other septic conditions; and Dr. Frank I. Dawson records the results of his investigations into the cytology of the blood after operations and in simple fractures: a leucocytosis occurs in these conditions apart from obvious sepsis and is attributed by the author to the effects of reaction of the tissues either to bacteria of low virulence or to chemical products derived from injured cells.

The Scottish Medical and Surgical Journal (November).—Professor W. Stephenson continues his account of Obstetric Views which need Reviewing and deals with some points in the first stage of labour, such as digital dilatation of the os and artificial rupture of the membranes. The article, like the others of the series, is well worth study. Dr. Carstairs C. Douglas writes of Formic Aldehyde as a Milk Preservative and would allow its use in dilutions such as 1 in 30,000 or 1 in 40,000. Dr. C. J. Lewis deals with the Bacteriology of Aural and Nasal Discharges in Scarlet Fever and other cases. He finds that the prevailing germs are streptococci, staphylococci, pneumococci, and diphtheroid organisms and suggests that uncured rhinitis may be a cause of "return" cases of scarlatinal infection. The text of Professor von Behring's communication to the recent Congress on Tuberculosis is published in this number but no attempt is made to solve the riddle of this very cryptic utterance.

New Inventions.

A NEW FORCEPS FOR HÆMORRHOIDS.

WHEN an operation for internal piles, by means of the ligature, is being performed some form of pressure forceps is generally used for the purpose of drawing down the piles while the ligature is being applied. I have devised a pattern of forceps which possesses many advantages over the ordinary straight forceps. The design has been admirably carried out by the Holborn Surgical Instrument Company, 26, Thavies Inn, Holborn-circus, London, E.C., and, as shown in the accompanying illustration, the forceps consist of long, strong, serrated blades, the points of which are slightly turned up. The handles are curved downwards so as to lie out of the way of the operator when the forceps are in position. A multiple catch is provided to insure that a firm hold upon the pile is obtained. A set of three forceps is required. The piles are drawn down by the weight of the forceps themselves, the turned-up extremity forming a prominence over which the loop of the ligature is readily passed and thereby prevented from slipping down over the forceps during the tying of the knot.

W. ERNEST MILES, F.R.C.S. Eng.,
Surgeon to the Gordon Hospital for Diseases of the Rectum, &c.
Devonshire-place, W.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, NOV. 29TH.

THE Council resumed on Wednesday, Nov. 29th, Dr. D. MACALISTER, the President, being in the chair.

The Case of Mr. William Patrick Kirwan.

The Council proceeded to the consideration of the facts proved against Mr. William Patrick Kirwan, registered as of 21, Danbury-street, Islington, N., Lic. R. Coll. Phys. Edin. 1882, Lic. R. Coll. Surg. Edin. 1882, who had been summoned to appear before the Council last session to answer the following charges, as formulated by the Council's solicitor:—

1. That you have associated yourself with a medical aid association—namely, a firm of chemists trading at various addresses as the Acme Medical Hall and Pharmacy—which association has systematically, by means of printed circulars, cards, labels, and notices, printed and painted, advertised your practice, name, and qualifications, and thereby canvassed for patients for you.
2. That you have enabled certain persons in the employ of the Acme Medical Hall and Pharmacy to practise medicine and to treat patients as if qualified by law to do so.

At the conclusion of the deliberations of the Council on the case on May 24th, 1905, the President, on behalf of the Council, addressed Mr. Kirwan as follows:—

The Council have decided that the facts alleged against you have been proved to their satisfaction; they have adjourned their decision in your case till the next session in November, when their judgment on the facts will be influenced by your conduct in the interval, more particularly in regard to canvassing, advertising, and the employment of unqualified assistants, with respect to which matters they will require satisfactory assurances at the adjourned hearing.

Mr. KIRWAN, addressing the Council, stated that since the last meeting of the Council he had removed the objectionable announcement that appeared in the windows of his surgery and had destroyed the printed matter which the Council deemed contrary to the etiquette of the profession. He had sold the surgery at Hammersmith and he had also disposed of his interest in the surgery at Islington. He now resided at his surgery in Silver-street, Notting-hill Gate. He had done everything to meet the wishes of the Council. As to allowing certain persons to treat patients, they had never done it to his knowledge and he never allowed it. He did his best always to be present. With regard to the disposal of the practices the publicity which his case had received by being reported in THE LANCET had retarded the sale of them. He had now no unqualified assistant and he was in the place himself from morning till night.

Dr. A. G. BATEMAN, representing the Medical Defence Union, asked some questions regarding the persons who had bought the practices.

Mr. KIRWAN said that he got somewhat into a hole financially and he took the first opportunity to sell them. He did not care who bought them so long as he got some little money out of them. His wish was to conform to the desire of the Council and to live in one surgery himself. After mentioning the occasions on which he had advertised the practices in THE LANCET he stated, in reply to Sir WILLIAM THOMSON, that he had honestly endeavoured to carry out the decision of the Council and he had gone to work at once to do so.

Mr. T. W. TYRRELL, who appeared as a witness for the complainants—the Medical Defence Union—spoke to having on Nov. 24th, 1905, visited 3, Silver-street, Notting-hill Gate, and found the name of Mr. Kirwan exhibited on the premises. He said that he received some medicine from a man whom he saw in the shop and who told him that he must see Mr. Kirwan from 6 to 9 that evening. Witness afterwards went to the shop in Fulham Palace-road, formerly owned by Mr. Kirwan. He found that Mr. Kirwan had left there some months ago. In the window of the shop was a card with the announcement that Dr. Scott, M.D. U.S.A., specialist in urinary and organic diseases, was the proprietor of the establishment. Witness further stated that on Nov. 27th last he attended Nos. 21 and 23, Danbury-street, Islington, and found announcements on the wall regarding Mr. Kirwan's hours of attendance. The man whom he saw inside said that he expected Mr. Kirwan would be there on and off for the next two months.

In reply to Dr. NORMAN MOORE, Mr. KIRWAN said the statement that he had promised to go to this place for two months was wrong. He was anxious that the medical man who bought the practice should do well and he promised to go there off and on for a week to introduce him.

The Council having sat *in camerâ*,

The PRESIDENT announced that the Council had judged Mr. Kirwan to be guilty of infamous conduct in a professional respect and had directed the Registrar to erase his name from the Medical Register.

The Case of Mr. William Harding Crowther.

The next case dealt with was that of Mr. William Harding Crowther, registered as of 15, Bloomfield-road, Ealing, London, W., Lic. Soc. Apoth. Lond. 1876, Lic. Fac. Phys. Surg. Glasg. 1880, who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you have systematically sought to attract patients by means of a series of advertisements in the *People* newspaper of an institution for stricture, &c., at 8a, Guilford-street, Gray's Inn-road, of which you are the surgeon and which is carried on for your private gain.

Dr. HUGH WOODS, secretary of the London and Counties Medical Protection Society, appeared as the representative of that society, the complainants, and he also submitted himself as a witness in support of the allegation.

Mr. Crowther did not attend and he was not represented.

Dr. WOODS said that in March his attention was called by a member of his society to the advertisement which was appearing weekly. It was found that the plate on the door in Guilford-street bore the name of "Dr. Crowther" who was identified as William Harding Crowther. In addition to the advertisement of "an institution for stricture" the attention of the society was also called to a little book which was regularly advertised in a similar manner, with only the name of the publisher, at the price of 1*s*. This book was issued by Mr. Crowther but he (Dr. Woods) did not lay stress upon it except in a secondary manner.

Mr. JOHN REARDON, 78, Fentiman-road, South Lambeth, gave evidence to the effect that as a result of reading the advertisement he went to the address given in Guilford-street and consulted Mr. Crowther. He detailed what occurred.

Mr. WINTERBOTHAM, the Council's solicitor, informed the Council that two letters had been received from Mr. Crowther. In the first the writer said that, while not allowing the accuracy of the information which had been furnished in support of the charge, he had stopped the advertisement. His health was so bad that he could only with difficulty carry on any practice at all and in the circumstances he requested that his letter should close the matter. In reply to a further communication from the Council Mr. Crowther said he had thought the stopping of the small notice in the newspaper would have been sufficient. As he was in bad health he could not appear before them. Although he submitted himself to the judgment of the Council he pointed out that he had never promised not to advertise and that so far as he was aware there were no rules in the matter in the corporations whose Licences he held.

Sir VICTOR HORSLEY: Has he furnished a medical certificate that he is unable to attend?

The PRESIDENT: These are all the communications we have received.

After the Council had deliberated *in camerâ*,

The PRESIDENT said: The Council has carefully considered the charge against William Harding Crowther and has come to the conclusion that the facts alleged against him in the notice of inquiry have been proved to the satisfaction of the Council. It has, however, also decided that the further consideration of the charge against him shall be adjourned until the next session of the Council and that he shall be informed of the fact I have mentioned, namely, that the Council has found the facts alleged in the notice of inquiry to be proved. The Council has postponed its judgment on the case until the next session in order to give Mr. Crowther an opportunity of appearing and being heard before judgment is pronounced. It also desires that he should at once produce a medical certificate as to his present state of health.

The Case of Mr. Arthur Clarke Walker.

Consideration was then given to the case of Mr. Arthur Clarke Walker, registered as of 45, Mill-street, Liverpool, Lic. R. Coll. Phys. Edin. 1885, who had been summoned to

appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you seduced a girl who had come to you as a patient, whom you had been treating professionally at your surgery, and who had on your invitation become an inmate of your house to help you in your work and to learn nursing from you.

Mr. WALKER attended and stated that he was not represented by counsel or solicitor and he had no witnesses.

Mr. WINTERBOTHAM, the solicitor to the Council, said that in this case he had the duty cast upon him which he did not often have of putting the case before the Council. The complaint was lodged by the president of a home at Liverpool in which the girl was a nurse, and though he had written to the complainant asking her to be represented by counsel or solicitor she said that beyond putting the facts before the Council she did not feel that she would take the case further. But after consultation the President thought that it was his (Mr. Winterbotham's) duty to bring the matter forward. He then made a statement of the case.

Mr. WALKER submitted himself to examination and answered a number of questions.

The PRESIDENT: The case is now concluded so far as the examination of the accused is concerned and we adjourn our deliberation upon it until to-morrow.

The Council thereafter adjourned until Thursday.

THURSDAY, NOV. 30TH.

The Council met again on Thursday, Nov. 30th, Dr. MACALISTER, the President, being in the chair.

The Case of Mr. Arthur Clarke Walker.

Consideration was resumed of the case of Mr. Arthur Clarke Walker.

After the Council had deliberated *in camerâ*,

The PRESIDENT announced the decision as follows: I have to announce in public that the Council has found proved the facts alleged against Mr. Arthur Clarke Walker in the notice of inquiry; that it has adjudged him to have been guilty of infamous conduct in a professional respect; and that it has directed the Registrar to erase from the Medical Register the name of Mr. Arthur Clarke Walker.

The Case of Mr. Hamlet Lloyd Davies.

The next penal case taken up was that of Mr. Hamlet Lloyd Davies, registered as of 2, Crofton-street, Great Western-street, Rusholme, Manchester, M.B., Mast. Surg. 1874, Univ. Edin., who had been summoned to appear before the Council to answer the following charge as formulated by the Council's solicitor:—

That you have accepted and continued to hold the appointment of paid medical officer to the Rusholme and District Provident Dispensary, an association which systematically practises canvassing for the purpose of procuring patients.

Mr. DAVIES, answering the PRESIDENT, said he was not represented by counsel or by solicitor and he had no witnesses.

The Medical Defence Union were the complainants. They were represented by Dr. Bateman, and Mr. Hempson, the solicitor to the Union, was also in attendance.

Dr. BATEMAN, in opening the case for the union, called attention to the motion carried by the Council on June 6th, 1899, which was to the effect that the Council strongly disapproved of medical practitioners associating themselves with medical aid associations which systematically practised canvassing and advertising for the purpose of procuring patients. He also detailed the steps which had been taken by the Medical Guild of Manchester to bring the practice of canvassing under the notice of the officers of the Manchester and Salford Provident Dispensary, of whom Mr. Davies was one, in 1903. It could not be said in view of these steps that the matter had been sprung upon Mr. Davies. Then he explained the circumstances connected with the founding of the Rusholme and District Provident Dispensary and mentioned that when Mr. Davies was appointed medical officer he was asked to meet the local medical men but he replied that no useful purpose could be served by his meeting them, adding, however, "I intend placing the matter before the General Medical Council and will be ruled by their decision," and that "there is no canvassing carried on at all and has not been since my appointment." So far as he (Dr. Bateman) was aware Mr. Davies had not brought the matter before the Council and no action having been taken by him the only proper course to adopt in the opinion of the Medical Defence Union was to collect evidence as to canvassing and to raise the whole question before the Council.

The PRESIDENT: It appears from your statement that the Medical Guild of Manchester has taken a prominent share in formulating that complaint. One member of the Council (Mr. Young) is a member of that guild and he desires to say that he proposes to take no part in these proceedings.

Dr. BATEMAN: The British Medical Association has also taken a very great interest in this matter, sir.

Dr. LINDSAY STEVEN: I am a member of the British Medical Association and I want to know my legal position.

Dr. NORMAN MOORE: If the British Medical Association is the prosecutor it cannot also be the judge.

The PRESIDENT: Is the British Medical Association a prosecutor?

Dr. BATEMAN: The Association has taken an interest in the matter.

The PRESIDENT: You have not been instructed by that Association and do not appear for it.

Dr. BATEMAN: I have been directed to bring the matter under the notice of the Council by the Medical Defence Union alone.

Dr. LITTLE: The British Medical Association should not be introduced into these discussions in any form whatever.

Dr. BATEMAN then read various statutory declarations the general effect of which was that men had called upon people in the district, left circulars, and asked them to join the association.

Dr. WILLIAM EDWARD SAWERS SCOTT of Withington, Manchester, gave evidence in support of the charge.

Dr. SAUNDBY: Have you any personal knowledge that canvassing goes on?

Dr. SCOTT: I have been told of it by patients, but these patients have declined to make statutory declarations because they did not wish to be mixed up in the matter.

Mr. JOHN FEATHERSTONE of Fallowfield, Manchester, a registered medical practitioner, also gave evidence.

This closed the case for the complainants.

Mr. DAVIES spoke in his own behalf. He said that he had been totally ignorant of the canvassing. Answering questions, he said he had been medical officer to the dispensary for about 11 months and that he had told the collector that if any canvassing went on he would resign his appointment. He had held a similar position in a dispensary at Ancoats for three years. It was chiefly because of private matters that he resigned that position. He admitted, however, that canvassing had something to do with it. The matter of canvassing was in his mind when he took the Rusholme appointment; indeed, he brought the matter before the officials of the dispensary.

The PRESIDENT: You were aware that there was a danger of canvassing?

Mr. DAVIES: I wished to make them understand when I received the appointment at Rusholme that if there was canvassing I should resign.

Sir VICTOR HORSLEY asked whether during the 11 months of his appointment it had never been brought to his notice that the dispensary employed a canvasser.

Mr. DAVIES: No. I understood the man was a collector only, his duty being simply to take the moneys due from patients who belonged to the dispensary.

The PRESIDENT: What do you understand by canvassing?

Mr. DAVIES: Soliciting for a medical man by bringing forward his merits.

The PRESIDENT: You understand the collector did not do so?

Mr. DAVIES: That is what I gave the collector to understand. I told him I would be obliged to resign if anything of that kind occurred and he promised faithfully that he would not canvass; in fact, he tells me he has not done so.

Sir VICTOR HORSLEY: Mr. Davies apparently had his attention directed to this question of canvassing at the time he took up the appointment and I wish to ask him why when the medical practitioners of the district asked him to confer with them on the subject he refused to meet them.

Mr. DAVIES: At the time I felt it was a party question. I was asked on the second day after receiving the appointment and I thought it was hardly fair to approach me so soon on the matter.

Dr. LINDSAY STEVEN asked how Mr. Davies expected the number of members of the dispensary to grow.

Mr. DAVIES: I should say by the merits of the practitioner.

Sir VICTOR HORSLEY: You think the way in which the dispensary grew was because of the merits of the doctor, but do you think it reasonable to suppose that the dispensary should have 1100 members in 11 months simply by the merits of the doctor?

The PRESIDENT: That is a matter of opinion, I am afraid.

Mr. DAVIES pointed out that as a matter of fact he had resigned the appointment. He was legally bound for three months, but at the end of that time he would give up his connexion with the institution.

The Council deliberated *in camerâ*.

On the public being readmitted,

The PRESIDENT said that the Council had deliberated very carefully on the case and had come to the conclusion that the facts alleged against Mr. Davies in the notice of inquiry had been proved to the satisfaction of the Council. The Council felt that it was its duty to express its sense of the gravity of the facts that had been proved against him, but in order to give him an opportunity to reconsider seriously his relation to the Rusholme and District Provident Dispensary it had adjourned the further consideration of the charge till the next session in May, when he would have to appear to satisfy the Council as to his conduct in the interval.

Report of the Public Health Committee.

Dr. BRUCE moved that the report of the Public Health Committee be received and entered on the minutes.

This was seconded by Mr. JACKSON and agreed to.

The report was in the following terms:—

The President has referred to the Public Health Committee the following communications:—

British Medical Association, Medical Secretary's Office, 429, Strand, W.C., Nov. 15th, 1905.

DEAR SIR,—I am instructed by the Council and Public Health Committee of the Association to bring to the notice of the General Medical Council the effort which the Association is at present making to obtain an improvement in the conditions of appointment of medical officers of health as well as of sanitary inspectors in England and Wales. The matter has for a long time received the attention of the British Medical Association, and Sir Francis Sharpe Powell on several occasions introduced in the House of Commons a Bill promoted by the Association, which included provisions for placing medical officers of health in the same position as Poor-law officers in respect of security of tenure and superannuation. In order, however, to make the Bill as uncontentious as possible the Association has dropped proposals with respect to superannuation and I am instructed to inclose for the information of the General Medical Council a copy of the Bill in its present form as introduced into the House of Commons last session by Dr. Hutchinson, M.P., supported by Sir Walter Foster, Sir John B. Tuke, and others. I inclose also a copy of a memorandum setting forth concisely the reasons for which the Bill has been put forward.

The President of the Local Government Board, who has already expressed his general sympathy with the objects of the Bill, has now very kindly consented to receive a deputation from the Association and other bodies interested in the matter on Thursday, Nov. 30th, at 3 P.M. It is felt that in bringing the matter before the President of the Local Government Board on that occasion it would be of the greatest value to be able to state that the General Medical Council considered that the proposals contained in the Bill were calculated to increase the efficiency of the Public Health Service, both by the improvement in the standard of qualification and also by protecting medical officers of health from discharge on the ground practically, if not ostensibly, of faithful discharge of duty. The Council of the Association therefore trust that it may be possible for some representative or representatives of the General Medical Council to take part in the deputation to the President of the Local Government Board, and also that the Council, if it should think proper, should pass some resolution expressing general approval of the objects and principles of the Bill.

I am, yours faithfully,

J. SMITH WHITAKER, Medical Secretary.

D. MacAlister, Esq., M.A., M.D., F.R.C.P., President of the General Medical Council of Medical Education and Registration, 299, Oxford-street, W.

The memorandum attached to the Bill was as follows:—

The main objects of this Bill are to insure that none but those properly qualified shall be appointed as medical officers of health or sanitary inspectors and to give all such officers and inspectors similar security in their tenure of office to that enjoyed by Poor-law medical officers and metropolitan medical officers of health. As the law stands no qualification is required for a sanitary inspector except in London and as a general rule a medical officer of health or sanitary inspector is appointed from year to year only, and thus has no true security of tenure. Poor-law medical officers and metropolitan officers of health are not appointed for limited periods only and are removable only by or with the consent of the Local Government Board. The duties of medical officers of health and inspectors are so important and responsible that they ought to be intrusted only to fully qualified persons whose position is satisfactorily secured.

Except in London urban sanitary authorities have no legal power to appoint more than one sanitary inspector. It is desired to extend the metropolitan powers to all urban sanitary districts. In London the sanitary inspector is so called by law but outside London the law names him "inspector of nuisances." It is proposed that the London name shall be universally used.

The Bill itself was: "To amend the law relating to the qualification and tenure of office of Medical Officers of Health and Inspectors and for other purposes," and the text was as follows:—

Be it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same as follows:—

1. (1) A person shall not after the twenty-ninth day of September One thousand nine hundred and eight be appointed a medical officer of health unless he is a duly qualified medical practitioner and unless either—(a) He is registered on the Medical Register as the holder of a diploma in sanitary science, public health, or state medicine under section 21 of the Medical Act 1886 or (b) he has for three consecutive years before the commencement of this Act served as a medical officer of health of a district or combination of districts with a population according to the last published census of not less than fifty thousand or (c) the Local Government Board consents to his appointment. (2) A person shall not after the twenty-ninth day of September One thousand nine hundred and eight be appointed a sanitary inspector unless either (a) he is the holder of a certificate of such body as the Local Government Board may from time to time approve that he has by examination shown himself competent for the office or (b) he has for three consecutive years before the commencement of this Act served as a sanitary inspector of a district or combination of districts with a population according to the last published census of not less than twenty thousand or (c) the Local Government Board consents to his appointment.

2. (1) A medical officer of health or sanitary inspector shall not hold office nor be appointed for a limited period only and shall be removeable only subject to an appeal to the Local Government Board. (2) This section shall apply to every medical officer of health or sanitary inspector whether appointed before or after the commencement of this Act and notwithstanding any contract to the contrary.

3. An urban authority shall have power to appoint two or more sanitary inspectors.

4. (1) Section 24 of the Local Government Act 1888 shall be construed as if in sub-section 2 thereof the reference to regulations made by order under the Public Health Act 1875 included a reference to this Act or regulations made by order hereunder. (2) Save as in this Act expressly provided nothing herein contained shall abridge or diminish the powers conferred upon the Local Government Board by the Public Health Acts or the Public Health (London) Act 1891.

5. In this Act the expression "sanitary inspector" includes an inspector of nuisances and a sanitary inspector appointed under the Public Health Act 1875 or the Public Health (London) Act 1891 and an inspector of nuisances shall henceforth be designated a sanitary inspector.

6. Nothing in this Act shall apply to a medical officer of health or sanitary inspector appointed by the Local Government Board or by the council of any county under the Local Government Act 1888.

7. The enactments specified in the schedule to this Act are hereby repealed as from the twenty-ninth day of September One thousand nine hundred and eight, to the extent mentioned in the third column of that schedule.

8. This Act shall not extend to Scotland or Ireland.

9. This Act shall be read as one with the Public Health Acts and so far as this Act applies to London with the Public Health (London) Act 1891.

10. This Act may be cited as the Public Health (Officers) Act 1905 and shall come into operation on the twenty-ninth day of September One thousand nine hundred and five.

THE SCHEDULE.

ENACTMENTS REPEALED.

Section and chapter.	Title or short title.	Extent of repeal.
54 and 55 Vict. c. 76 (1891)	The Public Health (London) Act, 1891.	Section 133, sub-section (2).

The committee have given careful consideration to the proposed "Public Health (Officers) Bill" submitted to them and to the request of the authorities of the British Medical Association relating thereto. They find that the provisions of the Bill are intended to apply only to England in general, not to Scotland or Ireland. They understand that the existing law has been found to work satisfactorily in Scotland and in the County of London. But they take exception to Clause 2 of the Bill as being too general in its application. The committee think that this clause should be limited in its application to those medical officers of health who devote their whole time to public health work and to those sanitary inspectors who devote their whole time to sanitary duties. With this exception the committee are unanimously of opinion that the proposed change in the law of England would conduce to the public interest by improving the status of medical officers of health as regards both qualification and tenure and so affording them greater influence in the discharge of their responsible functions. The committee therefore recommend that the Council should express its general approval of the provisions of the Bill, with the exception indicated above. The committee are, however, of opinion that it would be inexpedient for the Council, at the present stage, to assent to the request that it should be officially represented on the deputation which is to be received on Thursday, Nov. 30th, by the President of the Local Government Board.

Dr. BRUCE moved the recommendation of the committee "that the Council express its general approval of the provisions of the Public Health (Officers) Bill, 1905, with the exception of Clause 2 (1) which as at present drafted is too wide in its application." He said that although in Scotland and Ireland and in the County of London medical officers had a security of tenure in England and Wales outside London the appointment was from year to year. On those occasions the local authority might put another man in the place of the man who held the appointment and there was sufficient evidence to show that that had been often done on grounds which were not only unfair to the man but against the interests of public health. An officer in discharge of his duties must come in contact with the

interests of men of the locality, who, if they thought he had been zealous in a direction that they regarded as prejudicial might persuade the local authority to refuse to continue him in office. If he wanted to continue holding his appointment he would be very chary in finding fault with things which in the interest of the public he ought to find fault with. The British Medical Association was trying to obtain security of tenure not so much in the interests of the individual as in the interests of the public at large. The Bill contained two clauses that were important—namely, the first and second. As to Clause 2, the committee thought it should not remain as it was. They did not wish to ask Parliament to give security of tenure to men who devoted only part of their time to the work. There were good reasons against so doing and they also thought that attempting to carry so much would defeat the object they were aiming at. The alteration they proposed was that only those medical officers of health and sanitary inspectors who devoted their whole time to their duties ought to have their office secured to them.

Sir JOHN W. MOORE, in seconding the adoption of the recommendation, said the amendment proposed was necessary from a public health point of view. Mr. Power, who was not now present, had explained to the committee that it was in contemplation by the Local Government Board to amend the Public Health Act. At present in England many of the districts were very small and the officers were necessarily underpaid. The proposition was to make larger districts and to secure the services of men who would give their whole time to the duties attached to their office. If that reform were to be carried out it would be exceedingly inconvenient to have a multitude of medical officers of health all over the country with a vested interest in their petty appointments for life. It was to avoid that that Mr. Power suggested the amendment so that the vested interest for life should be limited to those men who gave up the whole of their time to the duties.

Dr. NORMAN MOORE thought it would be a very great advantage if the provision giving fixity of tenure to medical officers of health could be passed, but he asked whether it was quite a proper position for the Council to appear supporting the Bill of an association. He felt some doubt as to whether the Council ought even to declare itself in favour of Bills brought forward by other bodies.

Mr. JACKSON said this was only an expression of opinion that was asked. He agreed with the Bill which he regarded as desirable. In the country many men could not carry out their duties properly owing to a sort of Damocles' sword hanging over them. The action they were taking might not be strictly within the limits of their duties but they ought to stretch a point as the Council very often did in other matters.

Mr. MORRIS questioned the propriety of taking active steps to promote a Bill which did not affect education or registration although they were all in accord with the proposals.

Mr. BROWN sympathised with the motion.

Sir VICTOR HORSLEY pointed out that one of the objects of the Bill was to make it statutory that a medical officer must be qualified in sanitary science. That was surely a matter of education and registration and, therefore, the Council ought to support the Bill.

Sir THOMAS FRASER said this matter seemed to him to be extremely serious. From his own experience as a medical officer of health long ago he thought there was a great deal of security of tenure in the case of those who held the larger appointments. He was at a loss to know why that security of tenure should not be extended to those who held the minor appointments. As he understood, the great object was to allow medical officers of health to act independently as far as possible. He could remember that in the "seventies" it was also the desire of the Local Government Board to do away with the small districts and at that time it did all it could to do away with the smaller appointments. He therefore asked whether they were to refrain from giving a great advantage to the gentlemen who held the minor appointments because there was some sort of idea that in the course of time there would be an amalgamation of the districts. He moved as an amendment that the words of the recommendation be limited to those expressing general approval of the Bill.

Dr. SAUNDBY seconded the amendment, remarking that it was the small appointments that ought to be secured.

Dr. LINDSAY STEVEN said that Mr. Power had informed the committee as to the belief of the Local Government Board regarding young men who received those minor appointments. In some such cases in the earlier years of the young man's practice in an area the public health work might be done well, because it was probably the greater part of the duties he had to perform. As years went on, however, and his practice increased the time he had to devote to public health might correspondingly diminish. As it might be desirable in the course of time to combine a number of smaller areas into larger areas, there was hesitation about part-time medical officers of health holding appointments for life. Mr. Power was willing that meantime they should be appointed for five, seven, or even a longer period of years, cessation of appointment at the end of the period to require the assent of the Local Government Board. He thought such a period quite long enough for any of the young men who did not devote their whole time to public health work. The words he had proposed to put in the Bill were not *ad vitam aut culpam* but words stating that the appointment should be made without limit of time.

Dr. BRUCE, in reply to the discussion, said that the effect of the amendment of Sir Thomas Fraser would be to set the Local Government Board over a vast number of small appointments and he asked the Council to consider the difficulty of dealing with partial inefficiency all over the country. He sympathised with the Local Government Board if it had to undertake a responsibility so heavy. If they wanted the Bill to pass they had better unload the ship.

Sir THOMAS FRASER having withdrawn his amendment, the recommendation as proposed by Dr. Bruce was adopted.

The Council then adjourned until Friday.

FRIDAY, DEC. 1ST.

The Council resumed on Friday, Dr. MACALISTER, the President, being in the chair.

Dental Business.

The Council proceeded to the consideration of the report of the Dental Committee on the charge against John Atwood, Thomas Rose Smart, Walter Bennett, Algernon Frederick Green, Montague Alex Levason, Daniel Shea, and George Blount. The complaint against the above-named persons having been referred to the Dental Committee to ascertain the facts the Dental Committee reported as follows:—

On Nov. 29th and 30th, 1905, the inquiry was held. Neither Mr. Smart nor Mr. Levason appeared personally or by a representative. Mr. Atwood appeared and was represented by counsel and solicitor. Mr. Bennett, Mr. Green, Mr. Shea, and Mr. Blount appeared in person. The Dental Committee was satisfied that notice of the inquiry was duly sent to Mr. Smart and to Mr. Levason, as prescribed by the Standing Orders.

The committee find that the following facts were established by the evidence: (*a*) The seven persons above mentioned are all on the Dentists' Register as in practice before July 22nd, 1878, and their addresses in the Register are as follows: John Atwood, 215, Piccadilly, London, W. Thos. Rose Smart, 15, Brownshill-road, Catford, London, S.E. Walter Bennett, 20, South-side, Clapham Common, London, S.W. Algernon Fredk. Green, 42, Bloemfontein-road, Shepherd's-bush, London, S.W. Montague Alex Levason, 3, Charteris-road, Glengall-road, Kilburn, N.W. Daniel Shea, 9, Charles-street, Knightsbridge, London, S.W. George Blount, 51A, High-street, Camden Town, London, N.W.

(*b*) The seven dentists above mentioned signed the memorandum and articles of association and thereby became members of a limited company incorporated under the Companies Acts for the purpose (*inter alia*) of entering into an agreement dated March 6th, 1905, and made between the above-named George Blount (in the said agreement described as trading as G. Guy White and Company), of 51A, High-street, Camden Town, surgeon dentist, of the one part, and Wm. Price, as trustee of the company, of the other part, for the transfer of the business carried on under the style of G. Guy White and Co., artificial teeth manufacturers, of 215, Piccadilly, London, W., together with the goodwill, trade marks, artificial teeth models, stock in trade, and book debts appertaining thereto, and to carry on the said business, and also for the purpose of establishing a system by means of which the great bulk of the industrial poor might be supplied with artificial teeth by periodical payments and to contract with municipal and parochial institutions for the examination of the teeth of school children and to provide artificial teeth at a uniform contract price within the means of the industrial community.

(*c*) The nominal capital of the company was £1000, divided into 1000 shares of £1 each. One of these shares was taken by each of the above-named seven dentists.

(*d*) The only other persons who appear to be shareholders are G. Guy White and F. Sinclair Kennedy, who were on May 2nd, 1904, convicted at the Marlborough-street police-court for infringement of the Dentists Act, 1878, and were each fined £5 and £5 5s. costs on proof that they, being unqualified and unregistered persons, had carried on business at 215, Piccadilly, under the style of G. Guy White and Company and had used the title of dentists and surgeon dentists.

(*e*) The said F. Sinclair Kennedy has acted as manager or managing director and the said G. Guy White has acted as a director of the said limited company since its formation. The said George Blount has also

acted throughout as a director and has attended meetings of the board and taken an active part in the affairs of the company.

(*f*) The said A. F. Green held an appointment under the company and attended at 215, Piccadilly, where he attended patients and performed dental operations and he handed to the witness Foley the objectionable circular of the company hereinafter referred to.

(*g*) The said J. J. Atwood, Walter Bennett, and D. Shea have taken no part in the affairs of the company beyond attending on one occasion at 215, Piccadilly, when they signed the memorandum and articles of association, and all or some of them received one guinea on so doing. They have not paid for the shares taken by them, nor have they received any dividend. They have, however, continued shareholders up to the present time, with the possible exception of D. Shea.

(*h*) The said J. J. Atwood, W. Bennett, and D. Shea [allege that they] acted throughout in ignorance of the facts above set forth as to G. Guy White and Co., and as to the said G. Guy White and Sinclair Kennedy, and that they knew nothing of the facts hereinafter set forth.

(*i*) Thos. R. Smart and M. A. Levason did not appear, but letters written by them were before the committee which disclaimed any connexion with or knowledge of the company or its affairs, other than that admitted by Messrs. Atwood, Bennett, and Shea, and there was no evidence before the committee contradicting this or showing their knowledge of the facts above set forth as to G. Guy White and Co., or the said G. Guy White or S. Kennedy, or of the facts hereinafter set forth.

(*j*) The said limited company has issued a circular of an objectionable character containing untrue statements—namely, the circular exhibited to the statutory declaration of Ada Florence Foley.

(*k*) The said limited company is associated for the purpose of obtaining business with a society named the Benevolent Dental Society of Great Britain, which systematically and extensively issues advertisements of an objectionable character. This society is advertised as founded to supply free teeth in all deserving cases. The secretary, a Mr. Edwin Drew, is in the habit of referring applicants to G. Guy White and Co., Limited, and that company then writes to the applicants offering to supply them with teeth at a reduced charge. Mr. Edwin Drew was in the habit of attending the meetings of the directors of G. Guy White and Co., Limited, and payments were regularly made to him by the company for commission on business introduced by him.

(*l*) The evidence before the committee consisted of the following:—

1. Statutory declarations by the following persons: (*a*) Mr. George Sidney Paternoster, dated Nov. 10th, 1905, exhibiting an advertisement of the Benevolent Dental Society of Great Britain, a letter dated April 30th, 1905, from Edwin Drew, the secretary of the said society, and a letter dated May 5th, 1905, from G. Guy White and Co., Limited, both letters addressed to a Mr. R. Healy, and a copy of a journal called *Amusement* for April–May, 1905, containing an advertisement and report of the said society. (*b*) Mr. Harry Pyle, dated Nov. 8th, 1905, exhibiting a letter dated April 28th, 1905, from the secretary of the said society, and another dated May 2nd, 1905, from G. Guy White and Co., Limited, both addressed to himself. (*c*) Mr. James Oscar Palm, dated Nov. 7th, 1905, exhibiting an advertisement of the said society in *Lloyd's Weekly Newspaper* for Nov. 7th, 1905, a postcard (undated) and a letter dated June 27th, 1905, from the secretary of the said society a letter dated July 5th, 1905, from G. Guy White and Co., Limited. (*d*) Miss Ada Florence Foley, dated Nov. 10th, 1905, exhibiting a letter dated Oct. 28th, 1905, from the secretary of the said society, a copy of a letter of same date from G. Guy White and Co., Limited, a circular of G. Guy White and Co., Limited, and a card of fees dated Nov. 1st, 1905, of G. Guy White and Co., Limited. (*e*) Mr. Ralf Peacock, dated Nov. 10th, 1905. (*f*) Mr. William Fletcher Thomas Brown, dated Nov. 28th, 1905, exhibiting a circular dated April 24th, 1905, and deposit certificate (undated) both issued by G. Guy White and Co. (the predecessors in business of G. Guy White and Co., Limited), and an office copy of the memorandum of association of G. Guy White and Co., Limited.

2. A certificate of the conviction on May 2nd, 1904, under the Dentists Act of G. Guy White and F. Sinclair Kennedy.

3. A statement, dated Nov. 10th, 1905, submitted by the British Dental Association.

4. Letters from Messrs. Perkins and Co., dated Nov. 27th, 1905; Messrs. Frizell and Co., dated Nov. 28th, 1905; and Mr. T. Morford, dated Nov. 28th, 1905, three of the chemists named as references in the circulars of G. Guy White and Co., Limited, to the solicitors of the British Dental Association, denying all authority for such use of their names.

5. The file of G. Guy White and Co., Limited, at the office of the Registrar of Joint Stock Companies.

6. Letters from the following of the seven above-mentioned dentists: from Mr. Shea, dated Nov. 11th; Mr. Smart, dated respectively Nov. 13th and 29th; Mr. Bennett, dated Nov. 15th; and Mr. Levason, dated Nov. 22nd, all in 1905.

7. A letter from G. Guy White and Co. to Mr. Atwood, dated March 23th, 1905.

8. A certificate, dated April 5th, 1905, for one share of £1 fully paid, of G. Guy White and Co., Limited, in the name of Mr. D. Shea.

9. The oral evidence of the following persons:—

10. Mr. Hole, from the office of the Registrar of Joint Stock Companies, Mr. G. S. Paternoster, Miss A. F. Foley, Mr. R. Peacock, Mr. W. F. T. Brown, Mr. W. Bennett, Mr. A. F. Green, Mr. D. Shea, Mr. T. T. Atwood, and Mr. G. Blount.

Parties being called, there appeared J. J. Atwood, W. Bennett, A. F. Green, and D. Shea.

Mr. R. W. Turner, instructed by Messrs. Bowman and Curtis-Hayward, appeared for the complainants, the British Dental Association.

The Council agreed to hear the parties on the facts as found by the committee. The accused parties present and Mr. TURNER having addressed the Council,

The PRESIDENT stated that none of the parties took objection to the facts as presented by the committee.

The Council then deliberated *in camerâ* and the PRESIDENT thereafter announced the resolution of the Council. The consideration of the charge against J. J. Atwood, T. R. Smart, W. Bennett, M. A. Levason, and D. Shea was postponed until next session when they would be expected to present themselves and give testimony as to their conduct in the interval. In respect of A. F. Green and G. Blount, the Council judged that on the facts found by the Dental Committee they had been guilty of conduct which was infamous or disgraceful in a professional respect and had directed the Registrar to erase their names from the Register.

Revision of Standing Orders.

Dr. NORMAN MOORE, seconded by Mr. MORRIS, moved that the report from the Executive Committee on the proposed revision of the Standing Orders relating to the visitation and inspection of examinations be received and entered on the minutes. It was in the following terms:—

The Executive Committee report that in accordance with the resolution adopted by the General Council on May 25th, 1905, viz.:—

"That the proposed revised Standing Orders relating to the visitation and inspection of qualifying examinations be remitted back to the Executive Committee for further consideration, and in particular that the committee should consult counsel as to the agreement of the proposed Standing Orders with Section 3 of the Medical Act of 1886"—

they have obtained counsel's opinion thereon and, having amended the proposed Standing Orders in accordance therewith, submit them for adoption in the following form:—

XXIII.—VISITATION AND INSPECTION OF QUALIFYING EXAMINATIONS.

1. The qualifying examinations of the several licensing bodies in the three divisions of the kingdom shall be visited and inspected on behalf of the Council from time to time as the Council shall direct.

2. The visitations shall be conducted by one or more members of the Council deputed as visitors for that purpose; the inspections by one or more inspectors appointed by the Council but not members thereof.

3. The cycle of visitations and inspections shall ordinarily extend over three years. Within each of the three years the Universities of one division of the kingdom and the licensing corporations of another division of the kingdom shall be visited and inspected.

4. The visitor or visitors shall be appointed by the Council at the May session in each year for the ensuing calendar year; and visitors belonging to one division of the kingdom shall be deputed to visit examinations held in another division. Should a visitor so appointed be unable to act, or should no appointment have been made in time for a particular examination, the Executive Committee, or in case of emergency the President, shall appoint a visitor for that turn. All appointments so made shall be reported to the Council at the session next following.

5. One or more inspectors shall be appointed for the cycle of inspections and for all three divisions of the kingdom. An inspector shall not, during his tenure of office, act as examiner in any qualifying examination.

6. A visitor shall receive no remuneration but shall be paid his travelling and hotel expenses.

7. The remuneration of an inspector shall be at the rate of £200 per annum, in addition to his travelling and hotel expenses.

8. A list of the examinations to be visited and inspected in the ensuing year with their respective dates shall be drawn up and circulated among members of the Council before or during the May session with a request that members will intimate to the President which examination or examinations they are willing to visit.

9. The President shall give to each visitor and inspector a formal commission in writing under the seal of the Council.

10. It shall be the duty of inspectors to report to the Council their opinion as to the sufficiency or insufficiency of each examination attended by them. Their reports shall set forth in order all necessary particulars as to the questions proposed in the written, oral, and practical parts of the examination, the cases and the appliances provided for clinical examinations, the arrangements made for invigilation, the method and scale of marking, the standard of knowledge shown by successful candidates, and generally all such details as may be required for adjudicating on the scope and character of examination. It shall be the duty of visitors to report separately from the inspectors on each examination visited by them, and they shall include in their report such particulars and observations thereon as they deem important for the information of the Council.

11. Visitors and inspectors shall include in their reports, in the form of a brief diary, a statement of the days and hours at which they were respectively present during the course of the examination, and of the parts or divisions of the examination in progress on each day.

12. Visitors and inspectors shall be made acquainted with such previous reports on the examination attended as the Executive Committee or the President may direct, together with the remarks and observations of the licensing bodies and the reports of the Examination Committee thereupon. They shall also be provided with copies of the recommendations of the Council in regard to professional examination, and shall include in their reports a statement of the extent to which these recommendations have been carried out in the case of each examination attended.

13. The reports of visitors and inspectors when prepared shall be forwarded to the President, who shall cause them to be printed. The final proof copies of the reports, as corrected, shall be signed in writing by the visitors or inspectors, as the case may be, and shall be preserved by the General Registrar as the authoritative copies.

14. Previous to the meeting of the Council at which the reports of visitors or inspectors are to be considered, confidential copies, not exceeding 50 in number, of each report shall be forwarded for consideration to the licensing body to which such report refers, with a request that the body will make such remarks and observations thereon as may be thought necessary, and will forward the same with as little delay as possible to the General Registrar.

15. A confidential copy of each report of the visitors or inspectors, together with the remarks and observations made thereon by the licensing body concerned, shall be supplied, when ready, to each member of the Council.

16. The Examination Committee shall consider and report to the

Council on each report of the visitors or inspectors; and shall also at the end of the cycle of visitations and inspections present to the Council a general report on the results and conclusions arrived at.

The report having been received

Dr. MCVAIL moved that its consideration be postponed until next session. The proposed regulations would have a very great effect on the future of inspections and visitations. Certain letters which he had sent since the last meeting and counsel's opinion were referred to in the Executive Committee's report, but probably members of the Council had not gone fully into the matter. It would take a long discussion to bring out the merits of the subject and he thought the question should be postponed till May when, in all probability, he would have another set of proposed Standing Orders which would entirely fulfil the requirements of the Act.

Dr. NORMAN MOORE, in seconding the motion, said that the subject was extremely complicated and it was quite clear that they ought not to make any change until they had thoroughly mastered it.

The PRESIDENT remarked that the Executive Committee had merely submitted those things for approval and had not suggested any motion on the subject.

Dr. BENNETT questioned the advisability of postponing the matter, when Dr. MCVAIL informed them that they would find a new set of Standing Orders brought up at the next session.

After further discussion Dr. McVail's motion for postponement was agreed to.

Notices of Inquiry in Penal Cases.

The Council then considered the following report from the Executive Committee on the question of amending the notices of inquiry in penal cases so as to enable the Council in cases where more than one charge is brought to come to a decision on each charge separately.

The committee recommend the adoption of the Standing Order in the following form:—

Standing Order XIV., Cl. 14, *Resolution* (*b*):—

(b) That the facts [*or* the following facts (*specifying them*)] alleged against in the notice of inquiry have been proved to the satisfaction of the Council.

Appendix A—notice to a registered practitioner to attend proceedings for removal of his name from the Medical Register—would read as follows:—

APPENDIX.

(A.) NOTICE TO A REGISTERED PRACTITIONER TO ATTEND PROCEEDINGS FOR REMOVAL OF HIS NAME FROM THE MEDICAL REGISTER.

SIR,—On behalf of the General Medical Council I give you notice that information and evidence have been laid before the Council by which the complainants make the following charges against you, namely: [*Here set out the circumstances briefly*], and that in relation thereto you have been guilty of infamous conduct in a professional respect, or that you were, on the day of convicted of the following [misdemeanour] at namely: [*Set out particulars of the conviction*].

And I am directed, further, to give you notice that on the day of , 18 , a meeting of the General Medical Council will be held at at o'clock in the to consider the above-mentioned charges against you and decide whether or not they should direct your name to be removed from the Medical Register, pursuant to Section XXIX. of the Medical Act, 1858. You are invited and required to answer in writing the above charges and to attend before the General Medical Council at the above-named place and time, to establish any denial or defence that you may have to make to the above-mentioned charges, and you are hereby informed that if you do not attend as required, the General Medical Council may proceed to hear and decide upon the said charges in your absence.

Any answer or other communication or application which you may desire to make respecting the said charges, or your defence thereto, must be addressed to the General Registrar of the Medical Council and transmitted so as to reach him not less than days before the day appointed for the hearing of the case.

A copy of the 29th Section of the Medical Act, 1858, and of a certain Standing Order of the General Medical Council, is inclosed herewith for your information. (Signed)

SOLICITOR TO THE GENERAL MEDICAL COUNCIL.

The report having been received and ordered to be entered on the minutes

Sir VICTOR HORSLEY moved the adoption of the Standing Order. He said that when a charge against a practitioner obviously consisted of more than one point the points should be set out so clearly that members of the Council might be enabled to form an opinion on them separately. There was to be a limit of time within which the accused's answer to the charges was to reach the Council.

Sir THOMAS MYLES seconded the motion.

Dr. NORMAN MOORE asked whether the Executive Committee had considered whether it would be right in asking an accused person for an answer to charges to warn him that his letter might be used against him. They had had several instances, quite rightly, no doubt, of persons who were convicted on their own statements in their letters and against whom there was no other conclusive evidence.

The PRESIDENT said that the matter was not considered afresh, but these Standing Orders, except in the changes which Sir Victor Horsley had called attention to, were after very long experience fixed by Mr. Muir Mackenzie.

The motion was adopted.

Warning Notice to Practitioners.

On the motion of Sir VICTOR HORSLEY, seconded by Dr. NORMAN MOORE, the following report from the Executive Committee on the desirability of issuing a general warning notice to medical practitioners against the practices of canvassing and advertising was received and entered on the minutes:—

The General Council on May 26th, 1905, passed the following resolution:—

"That the communication from the British Medical Association respecting the desirability of issuing a general warning notice to medical practitioners against the practices of canvassing and advertising for the purpose of procuring patients be remitted to the Executive Committee, and that they be requested to confer with the legal advisers of the Council on the subject and if considered advisable to draft a form of notice of warning to medical practitioners for consideration at the next meeting of Council."

The Executive Committee having considered this question, together with an opinion by counsel thereon, recommended that the following notice be adopted:—

Whereas it has from time to time been made to appear to the General Medical Council that some registered medical practitioners have, with a view to their own gain and to the detriment of other practitioners, been in the habit of issuing or sanctioning the issue of advertisements of an objectionable character or of employing or sanctioning the employment of agents or canvassers for the purpose of procuring persons to become their patients: And whereas in the opinion of the Council such practices are contrary to the public interest and discreditable to the profession of medicine: "The Council hereby give notice that any registered medical practitioner resorting to such practices thereby renders himself liable to be charged under the 29th section of the Medical Act, 1858, with 'infamous conduct in a professional respect,' and if after due inquiry he is judged by the Council to have been guilty of such conduct the Council may, if they see fit, direct his name to be erased from the Medical Register."

Sir VICTOR HORSLEY, in moving the adoption of the report, said that the effect produced on the profession by the Council's warning notice relating to the covering of unqualified practitioners was such as to encourage them to issue the warning notice now proposed if they wanted to prevent the cases that came up from time to time. Seeing that they had now had cases tried on their merits and that they had come to definite opinions framed on their experience the time had now arrived when the Council could justly, and with great profit to the profession, issue the proposed warning notice. He thought that the notice would be warmly approved by the profession.

Sir JOHN BATTY TUKE seconded the motion.

In the course of discussion Sir HUGH BEEVOR said that there was an important opinion by Mr. S. G. Lushington, counsel to the Council, contained in the minutes of the Executive Committee which ought to be brought to the notice of the public. It was in the following terms:—

I have carefully considered the terms of the proposed notice. As it so closely follows the precedents in the accompanying print, some of which may have been drafted under advice, it is with diffidence that I suggest any alterations; but it seems to me that unless altered the draft notice not only appears to some extent to prejudge cases which may be brought before the Council for inquiry and for the exercise of their judicial discretion as to punishment, but also is open to the construction that it passes judgment on the cases referred to in the recital which have not been the subjects of due inquiry, in the sense that the practitioners in question have not been called upon to make their defence. If the operative part, however, be slightly altered, it seems to me that the recital is excellent. It states accurately and concisely the practice objected to and the grounds of objection to it. The alteration which I suggest in the operative part is that it should read as follows:

"The Council hereby give notice that any registered medical practitioner resorting to such practices thereby renders himself liable to be charged under the 29th section of the Medical Act, 1858, with 'infamous conduct in a professional respect,' and if after due inquiry he is judged by the Council to have been guilty of such conduct the Council may, if they see fit, direct his name to be erased from the Medical Register."

I should like to add this observation on the subject of advertising generally, that I am not aware of any legal decision which goes farther than the judgment in Partridge's case at p. 31 of Mr. Farrer's book of Medical Cases, where it is clearly laid down that advertisements claiming superiority over fellow-practitioners or imputing to them inferiority, or offering to give professional services at a cheaper rate, amount to "infamous conduct in a professional respect." Such advertisements, no doubt, both mislead the public and libel other members of the profession. It seems to me that the objection to advertisements not going to these lengths must be grounded more upon the difficulty of restraining advertisement, if allowed at all, from its inevitable tendency to go to these lengths than upon any other grounds. The issue of the proposed notice will be, in my judgment, pretty sure to result in bringing up for decision sooner or later the question whether

every kind of advertisement is to be suppressed, and, if so, the grounds upon which it might be deemed "infamous conduct in a professional respect" must be well considered beforehand.

The motion was then agreed to and the report adopted.

Recognition of Japanese Qualifications.

The Council considered a report from the Executive Committee arising out of the correspondence with the Privy Council on the subject of the extension of Part II. of the Medical Act, 1886, to Japan. The Executive Committee recommended that the answer to the Lord President should be as follows:—

That the Council has heard with interest of the application of the Japanese Government for the extension of Part II. of the Medical Act, 1886, to the Empire of Japan, and that the Council will be prepared at the proper time to take all necessary steps for arriving at a decision regarding the recognition of such Japanese qualifications as may entitle the holders to registration in the Foreign List of the Medical Register.

Dr. NORMAN MOORE moved that the recommendation be adopted.

Sir CHRISTOPHER NIXON seconded the motion which was carried without discussion.

The PRESIDENT said he was gratified with the manner in which the Council had received this extremely interesting communication. It would be a matter of great satisfaction to the nation with which we were in close bonds of amity at the present moment.

The following is the correspondence referred to:

(*a*)

Privy Council Office, 3rd July, 1905.

SIR,—I am directed by the Lords of the Council to transmit to you the accompanying copy of a correspondence (as marginally noted) in regard to the application to Japan of Part II. of the Medical Act, 1886, and to request that you will be so good as to move the General Medical Council to favour their lordships, at their earliest convenience, with any observations they may have to make thereon.

I am, Sir, your obedient servant,

The Registrar, General Medical Council. A. W. FITZROY.

[INCLOSURE.]

Foreign Office, June 29th, 1905

SIR,—I am directed by the Marquis of Lansdowne to transmit herewith, to be laid down before the Lord President of the Council, the accompanying copy of a Note from the Japanese Minister at this Court requesting that steps may be taken so that Japan may be recognised as one of the countries to which the Medical Act of 1886 applies, thus enabling Japanese medical practitioners to practise medicine in the Straits Settlements as well as in the other parts of the British Empire.

I am also to inclose a copy of a letter addressed to the Colonial Office on the subject.

His Lordship would be glad if the Lord President would take the request of the Japanese Minister into his favourable consideration.

I am, Sir, your most obedient, humble servant,

The Clerk of the Council. E. GORST.

[INCLOSURE.]

Japanese Legation, June 23rd, 1905.

MONSIEUR LE MARQUIS,—Acting under instructions from my Government, I have the honour of requesting your Lordship's good offices in the matter of enabling the Japanese medical practitioners to practise medicine in the Straits Settlements. The Japanese Consul at Singapore reported during last year to the Imperial Government that the Government of the Straits Settlements presented to the Legislative Council a Bill entitled "An Ordinance to provide for the registration of Medical Practitioners in the Colony." According to Section (*b*) of Article 11 of this Ordinance the holder of a degree or licence in medicine and surgery of any medical school in the Empire of Japan is entitled to registration, but it is required by the same section that such degrees, diplomas, or licences must be those recognised as entitling to registration by the General Council of Medical Education and Registration in the United Kingdom. The Medical Act of 1886 stipulates that any person in order to be entitled to be registered as a foreign practitioner in the Medical Register must be a holder of some recognised foreign medical diploma granted in a foreign country to which the Act applies. The Empire of Japan, however, is not one of the foreign countries to which the Medical Act applies, and consequently, in spite of the apparent fair treatment meted out to the Japanese medical practitioners by the above-mentioned Ordinance providing for the registration of medical practitioners in the colony, they are altogether barred from practising medicine in the Straits Settlements as a result of the legislation above referred to.

In view of the fact that Japan has long since been granting, without examination, the licences for practising medicine to any British medical practitioners who possess recognised British diplomas or who are duly registered in the Medical Register of the United Kingdom, and also of the fact that the ability and knowledge of the Japanese medical practitioners amply entitle them to be registered as such in any part of the United Kingdom, the Imperial Government earnestly hope that the British Government will see their way to cause some measures to be taken by which Japan shall be recognised as one of the countries to which the Medical Act applies, thus enabling the Japanese medical practitioners to practise medicine in general in the Straits Settlements as well as in the other parts of the British Empire.

I shall feel much indebted to you if your Lordship, in compliance with the desire of the Japanese Government, will be good enough to bring the above to the notice of the proper authorities of His Majesty's Government. I have, &c.,

The Marquess of Lansdowne, K.G., &c. TADASU HAYASHI.

[COPY.]

Foreign Office, June 29th, 1905.

SIR,—I am directed by the Marquess of Lansdowne to transmit herewith, to be laid before the Secretary of State for the Colonies, the accompanying copy of a Note from the Japanese Minister at this Court requesting that Japanese medical practitioners may be enabled to practise in the Straits Settlements and in other parts of the British Empire.

A copy of this note has been forwarded to the Council office with the request that the communication from the Japanese Minister may be favourably considered; but, pending such consideration by the Privy Council and the General Medical Council, I am to inquire whether steps could be taken to amend Article II. of the "Ordinance to provide for the registration of Medical Practitioners in the Straits Settlements" so as to exclude the condition as regards the recognition of Japanese degrees, diplomas, and licences in the United Kingdom.

I am, Sir, your most obedient, humble servant,

The Under Secretary of State, Colonial Office. (Sd.) E. GORST.

(*b*) ANSWER FROM THE REGISTRAR.

[COPY.]

No. 15,293. 7th July, 1905.

SIR,—Referring to my acknowledgment of your communication of 3rd inst., and assurance that the correspondence in regard to the extension of Part II. of the Medical Act, 1886, to Japan shall receive the earliest attention of this Council I am directed by the President to represent that, as, in the event of such extension, it will become its duty to consider what medical diplomas should be recognised as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery, it is very desirable that this Council should be supplied with information as to the curriculum to be gone through and the length of course required for medical licences and degrees in Japan.

In the case of the application in regard to Italy you were good enough to supply such information and perhaps in the present case you would kindly cause similar information to be afforded to this Council. The Council would also like to have before it the law prevailing throughout the Empire of Japan relating to British medical practitioners.

One of the inclosures sent refers to a communication from the Foreign Office to the Colonial Office inquiring as to a possible amendment of Article II. of the "Ordinance to provide for the registration of Medical Practitioners in the Straits Settlements" so as to exclude the condition as regards the recognition of Japanese degrees, diplomas, and licences in the United Kingdom. The President would be obliged could he be informed what was the answer given by the Colonial Office to the suggestion. I am, &c.,

H. E. ALLEN, Registrar.

The Clerk of the Council, Privy Council Office.

(*c*) FURTHER COMMUNICATIONS.

The Clerk of the Council, Privy Council Office,
London, S.W., 22th July, 1905.

SIR,—Referring to my letter of the 3rd instant (No. 94,874), and to your reply of the 7th idem (No. 15,293), in regard to the application to Japan of Part 2 of the Medical Act, 1886, I am directed by the Lords of the Council to transmit to you the accompanying copy of a Note from the Japanese Minister at this Court furnishing information in regard to the curriculum to be gone through by medical practitioners in Japan, &c., and as to the law in force in Japan relating to British medical practitioners, and I am to request that, in laying this information before the General Medical Council, you will move them to bestow the earliest consideration upon the matter that it is in their power to give. I am, Sir, your obedient servant,

A. W. FITZROY.

The Registrar, General Medical Council.

[COPY.]

Japanese Legation, July 21st, 1905.

MONSIEUR LE MARQUIS,—In reference to your letter of the 17th inst., in which your lordship requested me to furnish information as to the curriculum to be gone through by medical practitioners in Japan, &c., I have the honour to state that those who may be granted by the Minister of the Interior licences as medical practitioners are as follows: 1. Those who have passed the general examination for medical practitioner. 2. Those who have finished the course of the Medical College of the Imperial University, or other governmental or public medical schools, or of some private schools, specially appointed by the Minister of Education.

I beg herewith to inclose the list of subjects in the general examination for medical practitioner (Inclosure No. 1) and the calendar of the Tokio Imperial University (Inclosure No. 2), in which you will find the list of subjects the students have to study therein as well as the length of the course (p. 79 of the calendar). I may point out that before the students enter the Medical College they must finish the course of grammar school, middle school, and preparatory school for university, which extends over at least 14 years in all. A graduate of the College may obtain licence without examination.

In the case of other medical schools the qualification of the candidate and subjects of lessons are nearly the same as in the University, the course extending over four years.

I also beg to inclose the regulations now in force in Japan, applicable to the licence for British medical practitioners (Inclosure No. 3).

I have, &c.,

(Signed) TADASU HAYASHI.

The Marquis of Lansdowne, K.G., &c., &c., &c.

[INCLOSURE No. 1.]

The subjects of the General Examination for Medical Practitioners:—

1. Physics.
2. Chemistry.
3. Anatomy.—Histology, Viviparity (Embryology), Topographical Anatomy, Anatomy.
4. Physiology.—Physiology, Medical Chemistry.
5. Medicine.—Medicine, Pathological Anatomy, Diagnosis, Psychiatry, Paediatrics.
6. Surgery.—General Surgery, Special Surgery, Bandaging, Dermatology, Syphilis.
7. Obstetrics.
8. Pharmacology.—Pharmacology, Materia Materia.
9. Ophthalmology.

The candidate must study medical science at least for three years.

[INCLOSURE No. 3.]

Regulations regarding the Licence of Medical Practitioner. (1883.)
(Translated at the Japanese Legation, London.)

Article 4. In the event of any persons who may have finished the

course in the medical department of a University or Medical College of a foreign country, or who may have obtained a licence to practise in a foreign country, applying for licence to practise in Japan, and presenting those diplomas or licences for inspection, the Minister of the Interior shall be at liberty to confer the needful licences on them without further examination.

(d) ANSWER FROM THE REGISTRAR.

August 3rd, 1905.

SIR,—With reference to your further communication, No. 95069 of 28th ult., I am directed by the President to state that, as far as the question of Japanese law is concerned, there is apparently ground for the opinion that it affords to the registered medical practitioners of the United Kingdom such privileges of practising in Japan as are contemplated by Section 17 of the Medical Act, 1886.

In the event, however, of His Majesty by Order in Council declaring that Part II. of the Medical Act, 1886, shall be deemed to apply to Japan, it would still remain for the General Medical Council to consider which of the medical diplomas of Japan should be recognised "as furnishing sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery" in the United Kingdom.

As the Medical Council will not meet till November it is impossible for the President to say more at present than that the Council will, if necessary, give most careful consideration to the question of what qualifications granted in Japan ought to be recognised as of this standard. If the precedents of India and Italy are followed the Council's recognition would probably be limited to the medical degrees granted by the Imperial University of Japan.

With reference to the immediate question of practice by Japanese practitioners in the Straits Settlements it appears to the President that it would be a simpler step, and one which could be taken without bringing into operation the Act of 1886, were the law in force in that Colony to be so amended as to permit duly licensed Japanese practitioners under such conditions as may be thought desirable by the administration, to enjoy local privileges of practice without requiring them to possess qualifications which are registrable in the United Kingdom.

In view of the fact that among the Japanese practitioners in the Straits Settlements the proportion holding degrees from the Imperial University is not likely to be large, the mere application of Part II. of the Act of 1886 to Japan, with the probable limitation of its operation to those who hold particular qualifications of a university standard would presumably have the effect of excluding from the privilege of local practice many who are desirous of obtaining it.

I am, Sir, your obedient servant,
H. E. ALLEN, Registrar.

The Clerk of the Council, Privy Council Office.

(e)

Privy Council Office, Nov. 27th, 1905.

SIR,—Referring to the letter from the General Medical Council of the 3rd of August last (No. 13,369) in regard to the proposed application of Part II. of the Medical Act, 1886, to Japan, I am directed by the Lords of the Council to inform you that the suggestion contained in the Registrar's letter as to a possible amendment of the Straits Settlements Ordinance providing for the registration of medical practitioners, was duly conveyed to the Colonial Office, but the Secretary of State would prefer not to recommend any alteration in the Ordinance until a decision is arrived at upon the general question.

I am, Sir, your obedient servant,
The President of the General Medical Council. A. W. FITZROY.

Suggested Students' Registration Fee.

On the motion of Sir WILLIAM THOMSON, seconded by Sir CHRISTOPHER NIXON, the following report from the joint Finance and Executive Committees on the institution of a students' registration fee was received and entered on the minutes:—

The Executive and Finance Committees sitting jointly in accordance with the resolution of the Council on May 27th, 1905, namely:—

"That it be remitted to the Finance and Executive Committees to take into consideration the suggestion made by the President in his address at the opening of the present session to the effect that a small fee might with advantage be charged for students' registration"—

have considered carefully the question remitted to them. The passage in the President's address, to which reference is made, is as follows:—

"The suggestion has been made from an important quarter that one of the services gratuitously performed by the Council might be made self-supporting in a similar way. I refer to the maintenance of our Students' Registers. The General Registrar, with the help of the Branch Registrars, has ascertained that the ordinary expenditure on this branch of our work—for printing, postage, salaries, and time occupied in committees and councils over its details—may be estimated at about £400 a year. Against this outlay the only receipts are some £20 a year from fees for late or exceptional registration. If a fee, say of 5s., were charged for the certificate of registration in ordinary as well as exceptional cases the actual cost would just be covered and the Council's funds would be relieved to a corresponding extent. It is represented that for such a step no new legislation would be required, that the Students' Registers might remain on their present 'voluntary' basis, that the trifling fee would be readily paid and easily collected, and that the future action of the Council and of the licensing bodies in regard to students' registration would in no wise be prejudiced. If these representations are just, and I offer them for your mature consideration, the Council might be well advised to make the experiment."

The estimate made by the General Registrar of the cost, to the General and Branch Councils, of maintaining the Students' Registers on their present footing, was placed before them.

The following communication from the Lord President of the Privy Council was read:—

"No. 95,469.

"Whitehall, November 4th, 1905.

"MY DEAR DR. MACALISTER,—The Lord President's attention having been called to the suggestion that students should be invited to pay a small fee to cover the expenses of registration under the regulations of the General Medical Council, his lordship is of opinion that there is no objection to such an arrangement, having regard to the general obligations of the Council in connexion with medical education and to the obvious advantages enjoyed by students from the institution of a Students' Register.

"I am, yours very truly,
"A. W. FITZROY."

"Donald MacAlister, Esq., M.D., 299, Oxford-street, W."

The joint committees, after discussion of the various aspects of the question, agreed to the following recommendation:—

"That the General Council institute a fee of 5s. for registration in the Medical and Dental Students' Registers."

Sir CHRISTOPHER NIXON moved:—

That the recommendation of the joint committees—namely, that the General Council institute a fee of 5s. for registration in the Medical and Dental Students' Registers—be adopted.

For the benefit of the new members of the Council he gave a *résumé* of what had taken place in the Council in regard to this question. There was, he said, no intention whatever of establishing a compulsory registration of students. It was not intended to vary in any way the present system except that it was felt that a fee should be charged which would be sufficient to balance the expenditure which was incurred by the Council in carrying on voluntary registration. He thought it could be fairly argued that the advantage of the registration of students was largely an advantage to the students themselves. It gave them a certain status in the profession and he did not think there would be the slightest difficulty in obtaining from them so small a fee as 5s. Mr. Allen told them that, as a rule, when a student registered he asked what was the fee and was very much surprised that he had nothing to pay. Of course, he admitted that if the Council sought power to obtain compulsory registration they would have to obtain the opinions of the licensing bodies in regard to it, but this was another matter, and the position was strengthened by the statement of the Lord President that he was of opinion that there was no objection to such an arrangement as was now proposed having regard to the general obligations of the Council in connexion with medical education and the obvious advantages enjoyed by students from the institution of a Students' Register. These were not the words which usually appeared in official documents; they were a warm encouragement of the action of the Council. In conclusion, he maintained that while the Council had no right to spend money on what was not absolutely required, surely they were perfectly justified if they did spend money on such an important matter as the registration of students in asking for a sum which would recoup them for their expenditure.

Sir WILLIAM THOMSON seconded the motion.

Dr. BENNETT said that he opposed the proposal first of all because he did not believe that any student would pay 5s. for anything that he could avoid. In other words, once a student was aware of the fact that there was no compulsion he would not register at the expense of 5s.

Dr. PYE-SMITH also took the view that a registration fee would not be desirable. It was admitted that the Council had no right to impose this tax, and when it was said that it was only a very little one he would remind the Council that that was an excuse which had been brought forward for frailties of various kinds. Was it a dignified thing for the Council to impose a tax which could not be enforced? The matter might be put thus: If the students did not know what the state of things was they would pay the 5s., but if they did know they would refuse to pay, and if it became generally known, as it might be with very little publicity, the fee would bring in very little indeed. Then it was said it would help the Council in their finances. No doubt they wanted to spend less and have more, like many other corporations and individuals; that was a common difficulty. But was it quite certain that the Council would be relieved of it? He expressed his doubts; until he heard more on the subject he ventured to say that this was not a good way of raising their finances.

Sir JOHN BATTY TUKE said that his objection to such a tax was that it would impair the usefulness of the Students' Register as it now stood. It was true it was not complete, but with very few exceptions students did register and the Register was an extremely useful instrument in the hands of the Council. If a fee were imposed perhaps two out of every three students would still register but the the loss of the name of the third man would make the Register practically useless.

Dr. MCVAIL said he should like to ask a question. Some time ago the Royal Colleges of England ceased to require their candidates to register in the Students' Register of the

General Medical Council. Could the Registrar tell them whether that had affected the registration? Did the bulk of the students still register? Was the Students' Register still fairly accuracte as a record of the men who were beginning medical study?

Mr. ALLEN said it was extremely difficult to answer but so far as he could infer he did not think the absence from registration on the part of the students in the Royal Colleges was of great extent. Practically he thought that they all registered still; the difference was not very great.

Dr. MCVAIL said that that caused him to adopt the view of Sir John Batty Tuke. Like Sir John Tuke he attached great importance to having a Students' Register and he feared that this proposal would bring about a general declinature to register at all. The fee would be big enough to be vexatious and not at all big enough to be of any use.

Dr. LITTLE agreed that the proposal would do a great deal to wreck the success of the Students' Register.

Dr. MACKAY said it was quite true that in a strict legal sense registration was not compulsory but it was almost a necessity. The Council had the power of insisting that the students should have passed a preliminary examination and if the student failed to intimate his name by registration to the Council he might find at the end of the five years' curriculum that he had never complied with the Council's regulations. They were doing for the student a very great and valuable thing in maintaining the Students' Register and he thought that all the medical schools and other medical institutions ought to assist the Council in maintaining it. If the matter was thoroughly explained to the students they would not think it excessive considering the value of the instrument.

Sir THOMAS MYLES said that he could not vote for the proposal because the Council could not compel payment.

Sir JOHN MOORE was also of the opinion that the proposal might wreck the Students' Register.

Sir THOMAS FRASER said that so far as the University of Edinburgh was concerned they had never had the slightest difficulty in the question of registration. All their students invariably registered and he agreed with Dr. Mackay that the system was a most important boon to the students. Although, however, he had no doubt in his mind as to the entire wisdom of the proposition, he could not help thinking it might be a wise procedure to obtain legal authority.

Sir CHRISTOPHER NIXON, in his reply, said that he had formed a very distinct impression that this proposal would receive favourable consideration. That was the impression he gathered from conversation with several members, but he very much regretted to say that the tone of the discussion had shown that these gentlemen seemed to have forgotten their expressions of approval when discussing the matter outside that room. Perhaps it might be the wisest course at the present stage to ask permission to withdraw the proposal until the Council took up the larger question of compulsory registration.

Sir WILLIAM THOMSON, the seconder of the motion, concurred in this suggestion.

Mr. BROWN hoped that the motion would not be withdrawn. If there should be any difficulty about getting the fee then they could proceed to obtain an Act of Parliament.

Sir VICTOR HORSLEY also joined in expressing the hope that it would not be withdrawn.

Upon a show of hands being taken,

The PRESIDENT announced that it seemed the voting was equal.

Names and numbers were taken, with the result that the motion was defeated.

Against, 16.—Dr. Norman Moore, Mr. Morris, Mr. Thomson, Dr. Pye-Smith, Sir John Moore, Dr. Caton, Mr. Young, Dr. McVail, Sir F. Heron Watson, Sir Thomas Myles, Dr. Lindsay Steven, Dr. Cocking, Sir John Williams, Dr. Bennett, Dr. Little, and Sir John Tuke.

For, 13.—Mr. Tomes, Dr. Mackay, Lieutenant-Colonel Adye-Curran, Mr. Brown, Sir Christopher Nixon, Sir Victor Horsley, Sir George Philipson, Dr. Saundby, Dr. Finlay, Sir William Thomson, Dr. Bruce, Sir Hugh Beevor, and Sir Thomas Fraser.

Did not vote, 4.—The President, Sir T. McCall Anderson, Dr. Barrs, and Mr. Jackson.

Absent, 1.—Mr. Power.

The Medical Curriculum.

The following report by the Education Committee was received and entered on the minutes:—

The committee has to report on the questions remitted to it by the Council, on the motion of Dr. Lindsay Steven, which were as follows: "That it be remitted to the Education Committee to consider and report to the next session of Council whether the adoption by the Council of one or other or both of the following resolutions would not help to secure the attainment of the object the Council had in view in instituting the five years' curriculum, viz.: (1) That the preliminary scientific examination in physics, biology, and chemistry should be passed before the student begins the qualifying study of anatomy and physiology; (2) that before being admitted to the final examination the student should produce evidence that he has devoted the last year of his curriculum exclusively to practical and clinical work and study."

With respect to No. 1, the proposal does not contemplate the transference of the subjects it deals with to the preliminary course of study, which would withdraw from the Council the direct supervision of the arrangements for teaching them, nor does it seek to enact any special provision, the natural sequence of such a transference, for determining the length of the curriculum subsequent to the completion of the examination in chemistry, physics, and biology. The operation of the clause might have the effect of causing an undue amount of time to be devoted to the preliminary sciences, with two possible subsequent results. Either the student will be tempted to crowd the rest of his study into the remaining two or three years, as the case may be, of the five years' curriculum, a course to be seriously deprecated, or he will be compelled to take one or more additional years.

The committee is of opinion that the main effect of the proposed change would be to seriously lengthen the curriculum and thus to render entrance to the profession more difficult and expensive than it now is. As things now are the curriculum is far more often one of six or even more years—and this even in the case of industrious students—than one of five.

With regard to the second resolution the committee holds that distinct evidence of clinical and practical study in the fifth year should be produced by the student, showing that his time in that period of his curriculum has been mainly occupied in such work, but they would not suggest any regulation which should absolutely limit the work of each session of the period of professional study. The Council's recommendation is to the effect that regulations "should be so framed that attendance on systematic courses may be concluded at the end of the fourth year of study." With this the committee is in full agreement, but it would not advise that any proposal should be sanctioned which would prevent a student from supplementing his clinical study by suitable systematic work. Finally, the committee desires to point out that any alteration of the kind suggested must inevitably tend to lengthen the course of medical study.

Dr. MACKAY, the chairman of the committee, proposed that the report be adopted. He said that Dr. Lindsay Steven's proposals, while they themselves were directed to a definite and special point, yet touched the fringe of a very great and important subject; they dealt with the length of the curriculum, the number and the arrangement of subjects in the examinations, and one thorny and difficult question—namely, the inclusion or the exclusion in the professional course of the subjects of biology, chemistry, and physics. All these were profoundly interesting matters but the committee felt that it must accept the *status quo* and that if it were found that the proposals would interfere with the *status quo* it was bound to report against them. The two proposals must be taken to a certain extent together. If the first proposition, which referred to the idea that it would be a good thing to prevent a student going on to study the later subjects in the curriculum until he had passed in the preliminary sciences, was carried, they might find cases in which students were compelled to spend a year more than at present upon those sciences and also that it might be a strong temptation to make up for this lost year by taking the fifth year, which was meant for clinical work, and the result would be that what they had gained in the case of the first year was more than counterbalanced by the loss of the fifth year. The question of whether the course should be a six years' course was very important but they had not been asked to report upon it and the general feeling of the committee was that the time was hardly ripe for a proposal which would be likely to increase the length of the course. With regard to the second, the recommendation of the Council was that the final year should be devoted mainly to clinical studies but the committee felt that to force it to be devoted entirely to clinical studies would be a mistake. Again, it seemed to the committee that a man who was mainly devoting himself to clinical work in medicine and surgery might receive great advantage from an accompanying course in some of the higher branches of other subjects and that it would not be fair to put an absolute restriction upon such a course of study by adopting such a motion as this. There remained the general question as to whether the time was ripe for making a change in the Council's recommendations regarding the curriculum. Quite recently these recommendations had been laid down, the Council had gone into the matter with very great care, and he was speaking his own personal feeling when he said that they ought to leave matters alone for a little time. Progress might be expected to arise in a somewhat different way. Therefore he thought that the report should be adopted as it stood.

Dr. NORMAN MOORE seconded the motion.

Sir CHRISTOPHER NIXON said he quite agreed with Dr. Mackay as to the disadvantage of disturbing their regulations, but the curriculum as it existed was made before a number of those present were members of the Council, and

they were more or less pledged to carry out regulations which certainly he did not think were for the interests of the profession. He was very strongly of opinion that the course adopted by the Royal Colleges in London was a wise course. It was the course which he thought should be adopted universally because it practically removed preliminary scientific work outside the category of the strictly medical subjects, and the only objection he could see was in regard to the prolonging of the curriculum. He was also of opinion that the regulation of the Council in regard to the devotion of the fifth year exclusively to clinical medicine was a mistake. The consideration of such changes should not be postponed indefinitely and he would venture to suggest that the Education Committee should consider the expediency of putting the preliminary subjects, with the exception of organic chemistry, outside the medical curriculum and of making a four years' curriculum from the date of the passing of these preliminary subjects.

Dr. LINDSAY STEVEN said that as the proposer of the motion a year ago which had led to this interesting report he thought he ought to make a statement. He agreed with a good deal of what Dr. Mackay had said in respect of his report but he would venture to recall to the memory of the Council one or two of the points that led him to put the motion upon the paper. Many of the profession found that the young men who went forth from the universities and licensing bodies were deficient in that practical and clinical work which it was the object of all true medical training to impart. That the Council had felt that difficulty for many years had been evidenced by the numerous discussions which had taken place. He had pointed out that for a relatively long time the five years' curriculum had been a requirement of the Council and that experience had shown that the desire of the Council that the fifth year should be devoted entirely to clinical and practical studies had not been fulfilled. No doubt, as Dr. Windle said last year, the motion pointed in the direction of adding a year to the curriculum, but while it was the case that we were the only country in Europe that required only a five years' curriculum he did not want to make such a proposition; his endeavour was to obtain within the present limits more time for the fifth year's work.

SATURDAY, DEC. 2ND.

The Council resumed, Dr. MACALISTER, the President, being in the chair.

Representation of the University of Sheffield.

Dr. NORMAN MOORE said that he wished to address a question to the President regarding the University of Sheffield—namely, what steps could the Council take under the Medical Act to represent to His Majesty in Council that the representative of the University of Sheffield ought to receive the same fee as that received by the other members of the Council under the Medical Acts?

The PRESIDENT replied that under the provisions of the University of Sheffield Act, 1905, the General Medical Council might at any time represent to the Privy Council that it was expedient that the fees for attendance and travelling expenses of the member appointed by that University should be henceforth paid from the funds of the General Medical Council or of the English Branch Council. Under Section 10 of the Medical Act, 1886, it was provided that the Privy Council before considering such representation should cause the same to be laid before both Houses of Parliament. If either House of Parliament within 40 days after such a representation being laid before it presented an address to His Majesty declaring that such representation should not be carried into effect no further proceedings would be taken; but if no such address was presented within 40 days the Privy Council might, if it thought fit, report to His Majesty that it was expedient to give effect to such representation and it would then be lawful for His Majesty in Council to give effect to the same. Under Section 19 of the Medical Act, 1886, it was further provided that the Privy Council could act directly.

Dr. MCVAIL suggested that it would be better to remit the question to the Executive Committee to consider and report on in May.

The PRESIDENT: I must ask notice of that.

Report of the Education Committee.

The adjourned consideration of the report by the Education Committee on questions remitted to it, on the motion of Dr. Lindsay Steven, was resumed.

Dr. LINDSAY STEVEN, continuing his speech, said he had pointed out that the object of the Council was to obtain the fifth year entirely, if possible, for clinical and practical work. His objection to the statement in the report was that while it did not positively oppose the recommendations of the Council, yet it negatively and indirectly opposed them by bringing forcibly to the attention of the educating bodies and to the students that there was really no more need for the student to devote the whole of his fifth year entirely to clinical work. He felt that the proper course to be followed with this report was to receive it and enter it on the minutes. But the motion for adoption having been proposed he moved the previous question.

This was seconded by Mr. BROWN and agreed to.

Mr. MORRIS asked leave to bring in the following motion:—

That it be referred to the Education Committee to consider and report to the Council (1) as to the desirability of transferring the preliminary science subjects—physics, biology, and chemistry—from the curriculum of medical studies to a stage preliminary to the commencement of the curriculum; (2) as to the advisability of requiring a five years' period of study even after removing from the curriculum these preliminary science subjects.

Leave having been given to introduce the motion, Mr. Morris moved its adoption. He said that one strong reason why the committee should be asked to consider this question was the statement of the committee with regard to the first resolution. He thought it was a most unsatisfactory position for the Council to stand in with regard to the curriculum of medical education. If it were found that the majority of students had to pass six or seven years instead of five under the present system it was a very great reason why the committee should report to the Council whether it was not desirable to maintain a curriculum of five years even after the curriculum had been lightened by these science subjects. In his opinion, after 13 years' experience, the five years' curriculum had been proved to be a most deplorable failure. First of all, it was unequal and unfair to the students; it had cast an overwhelming burden on many of the medical schools; it was destroying, if it had not already destroyed, medical training as distinct from the acquisition of medical knowledge; and it was encouraging cramming instead of real learning. It had been most unfair to the public because the result was to turn out a large number of fledgling practitioners who were trained to a certain degree in scientific and theoretic matters but who were insufficiently prepared in comparison with their predecessors. This had come about by the neutralisation of the intention of the five years' curriculum, which was to provide an additional year of clinical study; but the result had been the encroachment upon the first year by science subjects and the preposterous demands made by the purely scientific teachers for time to study their subjects. The teaching of anatomy was very different from what it used to be. There was a slight experiment being tried by the Conjoint bodies—namely, making it necessary to pass through the science subjects before anatomy and physiology began. From what he learned from the teachers he thought it was going to prove a failure. There were numbers of resolutions on the minutes of the Council which showed that it had been the desire of the Council to put these preliminary subjects into a pre-curricula course. There had been three reasons why the Council had not acted in this way. In 1869 the Council thought there was a want of arrangement in the general schools teaching those subjects. There was now no longer that want of arrangement. Another reason was that from time to time when this matter was before the Council petitions were sent up from purely scientific teachers asking the Council not to entertain the proposal. The third reason was stated in the report of the Education Committee in 1901—namely, that there were certain statutes and by-laws of some of the corporations which would require to be altered. He thought that by referring the whole matter to the Education Committee members would be enabled in the meanwhile to lay the matter before the various bodies which they represented.

Mr. BROWN, in seconding the motion, referred to the absence of equipment for efficient scientific teaching in some of the schools.

Sir THOMAS FRASER remarked that so far as they in Scotland were concerned they had a perfect equipment.

Mr. BROWN said he was not referring to the universities.

The PRESIDENT remarked that when the Education

Committee's report was brought forward they would be able to consider all those matters.

Dr. LITTLE hoped that the conclusions of the committee would be in the hands of members three or four weeks before the Council met.

Sir THOMAS MYLES wished the committee to understand that the position of Ireland was different from that of England. The only sources of equipment in Ireland were the medical schools. The committee must not recommend such legislation as would penalise the Irish medical students by compelling them to put in another year.

Dr. MCVAIL remarked that when the Council remitted a matter to a committee it meant that there was a *primâ-facie* ground for the change. What they were proposing now was to send to a committee a remit to put these subjects amongst the preliminary subjects when only last year they settled the question of biology. He asked whether biology could be taught anywhere but in the universities or fully equipped schools. He was not going to oppose this motion although it was really upsetting the whole thing again. He believed in the six years' course and thought that the final year should be exclusively clinical but he would not have that at the expense of making the three science subjects inoperative. He did not believe in telling any man to go on with his profession who did not know physics, chemistry, and biology. He desired that the committee should be instructed to state its views as to how far those subjects could be studied outside medical schools and in particular what the effect might be in hindering the rise in preliminary education that the Council desired.

The PRESIDENT remarked that the Council did not commit itself by this motion to accepting or rejecting whatever conclusions the Education Committee might bring forward.

On the motion of Dr. PYE-SMITH, seconded by Sir VICTOR HORSLEY, the closure was applied to the discussion.

Mr. MORRIS'S motion was then agreed to.

Returns from Navy, Army, and India Boards.

On the motion of Sir PATRICK HERON WATSON, seconded by Mr. YOUNG, the following report from the Examination Committee was received and entered on the minutes.

The Examination Committee submits to the Council the following answers received from various licensing authorities in reply to a circular letter sent to them in accordance with the resolution of the Council on May 26th, 1905, viz.:—

"That the following recommendation contained in the report by the Examination Committee be adopted:—

'That a circular letter be addressed to the various licensing bodies drawing their attention to the percentage of rejections in the examinations for the Navy, Army, and Indian Medical Services, and that the Examination Committee be in future authorised regularly to consider the returns sent to the Council and to offer to the Council such suggestions as occur to them thereupon.'"

On June 1st a circular letter was issued to the licensing bodies concerned drawing their attention to the returns and on Sept. 20th a further letter was sent to the same bodies asking if they had any observations to make in reply.

The following answers have now been received:—

Body.	Answer.
R. Coll. Phys. Lond. ...	No observations are called for.
R. Coll. Surg. Eng. ...	No comment required.
Apoth. Soc. Lond. ..	No observations to offer.
Univ. Durh.	No observations or suggestions to make.
R. Coll. Phys. Edin. ...	Inquiries are not yet completed.
R. Coll. Surg. Edin. ...	Has not at present any remarks or suggestions to make, but will keep the subject under consideration.
R. Coll. Phys. Irel. ...	Unable to form an opinion owing to insufficient data.
R. Coll. Surg. Irel. ...	Not sufficient data upon which to form an opinion.
R. Univ. Irel.	Not considered necessary to make any observation, there being only two failures from this University.
Bombay Univ. (Grant Med. Coll.)	Does not think there is much cause for observation and suggestion.

Army Medical Service.

Sir PATRICK HERON WATSON moved that the following report by the Examination Committee be received and entered on the minutes:—

The committee have to report that out of the 49 candidates for places in the Army Medical Service, four were rejected, all of them in the subject of medicine. Two of these held the degrees of the University of Edinburgh, one held the diploma of the Apothecaries Society of London, and one held the diplomas of the Royal Colleges of Ireland.

The first place was gained by a candidate holding the degrees of the University of Edinburgh; the second and third places by candidates holding the diplomas of the Conjoint Colleges of England; and the fourth and fifth places by graduates of the University of Dublin.

For reasons not stated eleven candidates who had entered for the examination did not compete.

Sir THOMAS MYLES seconded the motion which was agreed to.

Inspection of Examinations of the University of Edinburgh.

On the motion of Dr. NORMAN MOORE, seconded by Sir THOMAS MYLES, the report from the Examination Committee on the inspection of the final examination (in surgery) of the University of Endinburgh was received and entered on the minutes.

I.—REPORT BY THE INSPECTOR ON THE FINAL EXAMINATIONS IN SURGERY FOR MEDICAL AND SURGICAL DEGREES OF THE UNIVERSITY OF EDINBURGH (MAY, 1905).

EXAMINATION IN CLINICAL SURGERY.

I attended throughout the oral examination on May 23rd, 24th, and 25th. I was also present when the candidates were writing their reports on cases. The examiners were Professor Annandale, F.R.C.S. Eng., F.R.C.S. Edin., and Dr. Hodsdon, M.D., M.Ch., F.R.C.S. Edin.; Mr. Cathcart, M.B., M.C., F.R.C.S. Eng., F.R.C.S. Edin.; and Mr. Riddell (Aberdeen), M.B., C.M. The examination took place within the Royal Infirmary, in wards reserved for the purpose and in adjacent rooms. The accommodation was ample and everything was well arranged and well managed. The examination consisted of: (*a*) a written report on a case; (*b*) an oral examination on two cases; an oral examination on two operations; an oral examination on instruments. An hour was allowed for the written report and invigilators were present. Any doubtful report was read by two examiners and marked after conference. There was an ample supply of suitable cases for the oral examination, including samples of eye, ear, and venereal disease.

Operations and instruments.—Cards had been prepared on which two operations were specified. On one of these operations the candidate was closely examined as to the marking out of incisions, the structures concerned, stages, &c. For the other he was told to write out a list of all the instruments required, and (in many instances) was questioned as to the manner in which they were used. The operations were well selected as tests—*e.g.*, ligature of the large blood-vessels; exposure of the large nerves; operations on the gall-bladder and ducts; other abdominal operations; excisions and amputations. No operations of a trivial kind were asked for. The cards were distributed to the candidates by lot, each candidate drawing one for himself out of the bundle. An ample assortment of instruments had been provided on a separate table in the ward or the adjacent operating theatre. A period of ten minutes was allotted to each of the three sections of the oral examination (half an hour in all); but in a considerable number of instances this time was exceeded in order that the candidates might be further questioned. Throughout the examination two examiners acted together, took part in the examination of each student, and allotted marks after conference. The marking was judicial and careful, and such as to insure, as it seemed to me, a sufficiently high standard as to both theoretical and practical knowledge on the part of the candidates who received pass marks.

EXAMINATION IN SYSTEMATIC SURGERY.

I attended throughout the examination hours on June 21st, 22nd, and 23rd and so was present at each section of the oral examination and at the final meeting of the examiners at which the marks were taken, and I read several of the candidates' written papers. The examiners were Professor John Chiene, LL.D. Glasg., M.D. Edin., F.R.C.S. Edin., and Mr. A. G. Miller, M.D., F.R.C.S. Edin. The written paper consisted of five questions, only four of which were to be answered (see appendix). The questions had reference to important subjects but they were limited exclusively to symptoms and treatment and no pathology was asked. The answers were for the most part satisfactory and showed that the candidates were well educated and had received sound instruction in practical surgery.

The Oral Examination (in General Surgery and Surgical Pathology).—This was conducted in a theatre conveniently adjoining the museum. It occupied ten minutes, or, when necessary, a longer time. The examiners were both present and examined alternately. But the second examiner questioned any candidate if he wished to do so. The candidates were examined on a wide range of subjects: talipes, Dupuytren's contraction, hernia, middle-ear disease, stricture of the rectum, infective osteomyelitis, fractured spine, &c. But it is worthy of notice that here, as in the paper, the questions were almost exclusively on practical surgery, while pathology and etiology received but limited attention. It is obvious that when pathology is largely omitted the examination is reduced in general level and becomes considerably less formidable from the candidates' point of view. The time (ten minutes) allotted to this part of the examination appeared to me to be too limited a period in which adequately to test the candidates.

Surgical Anatomy and Operations.—This section of the examination was conducted in the following manner:—A batch of 20 candidates filed past a table on which 20 cards were placed. 15 of these cards were blanks and five had an operation specified on their under surface. As each candidate passed the table he chose a card. Those who drew blanks went on to be examined in surgical anatomy; and the remaining five were required to perform the operations named on the respective cards. Thus 75 per cent. of the candidates were examined in surgical anatomy and only 25 per cent. in operative surgery. Such an arrangement cannot, I think, be regarded as entirely satisfactory, considering the important position which operative surgery occupies in the treatment of disease at the present day. True, each candidate knows he may be called upon to perform an operation. But he also sees that the chances are three to one that he will escape. And these are odds which will induce many a man to trust to luck and to prepare himself in a perfunctory manner. Further, as matters stand, 75 per cent. of the candidates in this section are subjected to no test at all and thus there is nothing to show whether they do or do not know their

operative work. I was present while the five candidates were operating. A very good subject had been provided. But there were two minor defects: (*a*) the instruments were all placed together in one tray, where they could not be so clearly displayed or so noiselessly selected by the candidates, as would be the case were they arranged in order on a long table; (*b*) candidates were, in some instances, left without assistance (in keeping the part in a suitable position or retracting the edges of a deep wound), so that they found it somewhat difficult to do themselves justice. The majority of the candidates showed only limited skill. But I was informed that the efficient teaching of operative surgery was rendered almost impossible by the scarcity of subjects.

Surgical Anatomy.—Only one examiner (with an assistant) was present and the examination was conducted in a manner with which I was not familiar. It consisted mainly, and in many instances entirely, in requiring the candidate to indicate the position of three structures which had been previously selected. Thus each student in the first group of candidates was asked to point to (*a*) the three chief terminations of the fifth nerve on the face (supra-orbital, infra-orbital, and mental foramina); (*b*) the course of the posterior tibial tendon from just above the ankle to its insertion into the scaphoid; (*c*) the sustentaculum tali. This was the whole examination when the candidates pointed correctly; no further questions were asked. In some instances the candidate's voice was never heard and the interview lasted somewhat less than a minute. In other cases, in which the candidate was unable to indicate the position of the structures required, further questions were put. I did not regard this examination as an adequate test. It was altogether too brief. This becomes apparent when it is mentioned that the pointing out of the situation of the sustentaculum tali constituted one-third of the whole examination. The examination should, I think, to reach a university standard, extend over at least ten minutes.

Practical.—This section (use of splints and apparatus for the treatment of dislocations, fractures, &c.) was well conducted; both examiners were present, but each marked the candidates he examined independently. Six men served as models; and there was a fair supply of splints and other requirements. Cards had been prepared on each of which was specified the injury which the candidate was to treat. These cards were reversed and placed on the table, and as the candidates passed the table each selected a card and proceeded to his work. The injuries named were well selected and included fracture of the femur, Pott's fracture, dislocation of the humerus (with methods of reduction), fracture of the humerus near the elbow joint, of the clavicle, &c.

Results.—The total number of candidates who completed their examination in surgery was 213, six under the old and 207 under the new regulations. Of these 32 (15 per cent.) failed to obtain pass marks and were rejected. There was a difference to be observed in the rate of marking in the clinical and in the systematic parts of the examination. In the clinical part 40 candidates (a little more than 18 per cent.) failed to obtain pass marks, but in the systematic part only 21—i.e., about 10 per cent., failed. 18 candidates who failed to secure pass marks in clinical surgery received sufficiently high marks in systematic surgery to make good the deficiency, so that when the two sets of marks were added together pass marks were reached. Only two candidates who failed to obtain pass marks in systematic surgery escaped rejection by securing higher marks in clinical surgery. This circumstance emphasises the conclusion that the marking in systematic surgery was on too liberal a scale. This over-liberality, I consider, arose mainly from the fact, noticed above, that practically no pathology was asked.

REMARKS.

I was met at every stage of both the clinical and the systematic parts of the examination with the utmost courtesy and any information I desired was at once most willingly supplied. The clinical part of the examination I regard as quite sufficient and the manner in which it was conducted by the four examiners concerned was in my judgment quite satisfactory.

In the systematic part there were defects which I have already mentioned and which it seemed to me could, in the main, be traced to one and the same cause—viz., that there were too few examiners. Whereas in the clinical examination there were four examiners, in the examination in systematic surgery there were but two. As the latter examination extends over a long period, is continued on weekdays without a break, and on each day occupies six hours (12 to 2 P.M. and 4 P.M. to 8 P.M.), the work makes heavy and exhausting demands not only on the time but also on the energies and mental freshness of the examiners. Considering the severity of the ordeal I was much impressed with the cheerful devotion and well-sustained efforts which the examiners displayed. Nor was it surprising to see that the examination in surgical anatomy was more brief and less searching than was desirable. I have already remarked that the time allotted to the section of general surgery and pathology was too short.

I venture to think that a necessary and great improvement would be effected by the appointment for the examination on systematic surgery of two additional examiners—one from an outside source, while the other might perhaps be selected from the junior staff of teachers in the University. This would allow of the association of two examiners at all stages of the examination. Regarded as a test for a university degree in surgery, the examination would, in my opinion, be improved by the provision of a more thorough and extensive examination of all candidates in surgical pathology, in surgical anatomy, and in operative surgery. The system by which marks were allotted appeared to me to be satisfactory (see Appendix).

CONCLUSION.

In my opinion the final examination in surgery of the University of Edinburgh, regarded as a pass examination in surgery, is "sufficient."

July, 1905. HOWARD MARSH.

APPENDIX.

UNIVERSITY OF EDINBURGH.

FINAL PROFESSIONAL EXAMINATION.

SURGERY.

TUESDAY, JUNE 13TH, 1905, 10 to 12 o'clock.

The subject of examination, and also the name and Edinburgh address of the candidate, to be written on the outside of each paper.

Any candidate who does not take his seat at his allotted table, or who has in his possession a book, or printed papers, or notes of any kind, or who communicates with another by word or sign, or who permits his paper to be seen by another, will be required to leave the room and will be reported to the Senatus.

Examiners:—Professor CHIENE and Mr. MILLER.

(FOUR *questions only to be answered.*)

1. Describe the symptoms and treatment of a case of spasmodic wryneck.
2. What are internal hæmorrhoids? Describe two methods of treatment.
3. Rupture of the urethra, anterior to the triangular ligament. Give the symptoms, appearances, and treatment.
4. Give the symptoms, dangers, and treatment of gonorrhœal conjunctivitis.
5. Describe the operation of complete excision of the elbow-joint.

TIME-TABLE OF FINAL EXAMINATION IN SURGERY AND CLINICAL SURGERY.

SUMMER, 1905.

CLINICAL SURGERY.

May 20.	Saturday	10-11.	Written.	In Royal Infirmary.
,, 22.	Monday	4.	Oral.	,,
,, 23.	Tuesday	10-1.	,,	
,, 24.	Wednesday	10-11.	Written.	
,, ,,	,,	4.	Oral.	
,, 25.	Thursday	10-12.	,,	
,, 26.	Friday	4.	,,	
,, 27.	Saturday	10-11.	Written.	
,, ,,	,,	11.30-1.	Oral.	
,, 29.	Monday	4.	,,	
,, 30.	Tuesday	10-1.	,,	
,, 31.	Wednesday	10-11.	Written.	
,, ,,	,,	4.	Oral.	
June 1.	Thursday	10-12.	,,	
,, 2.	Friday	4.	,,	
,, 3.	Saturday	10-11.	Written.	
,, 5.	Monday	4.	Oral.	
,, 6.	Tuesday	10-1.	,,	
,, 7.	Wednesday	10-11.	Written.	
,, ,,	,,	4.	Oral.	
,, 8.	Thursday	10-12.	,,	
,, 9.	Friday	4.	,,	

SYSTEMATIC SURGERY.

June 13.	Tuesday	10-12.	Written.	In Examination Hall.
,, 14.	Wednesday	9-12 & 4-6.	Oral.	In department of surgery.
,, 15.	Thursday	,,	,,	,, ,, ,,
,, 16.	Friday	9-12.	Practical bandaging and fractures, &c.	
,, ,,	,,	4-7.	Surgical anatomy and operative surgery.	
,, 17.	Saturday	9-12 & 4-6.	Oral.	
,, 19.	Monday	,,	,,	
,, 20.	Tuesday	9-12.	Practical bandaging and fractures, &c.	
,, ,,	,,	4-7.	Surgical anatomy and operative surgery.	
,, 21.	Wednesday	9-12 & 4-6.	Oral.	
,, 22.	Thursday	,,	,,	
,, 23.	Friday	9-12	Practical bandaging and fractures, &c.	
,, ,,	,,	4-7.	Surgical anatomy and operative surgery.	
,, 24.	Saturday	Meeting of examiners and results announced.		

EXAMINATION FOR DEGREES IN MEDICINE.

EXAMINATION MARKS.

1. N = *Non satis bene*—39 per cent. and below.
2. S − = Minus *satis bene*—40 to 49 per cent.
3. S = *Satis bene*—50 to 59 per cent.
4. S + = Plus *satis bene*—60 to 74 per cent.
5. B = *Bene*—75 to 89 per cent.
6. BB = *Admodum bene*—90 to 100 per cent.

II.—REMARKS BY THE BODY INSPECTED.

Remarks by the Faculty of Medicine of the University of Edinburgh on the Report of the Final Examinations in Surgery by the Inspector appointed by the General Medical Council.

The Faculty of Medicine have had under consideration the report on the final examinations in surgery by Professor Howard Marsh, the inspector appointed by the General Medical Council.

EXAMINATION IN CLINICAL SURGERY.

The Faculty note with satisfaction the remarks which the inspector has made upon the examination in clinical surgery and his commendation of the general arrangement of the examination and of the manner in which it was conducted by the several examiners.

EXAMINATION IN SYSTEMATIC SURGERY.

Upon the portion of the report dealing with the systematic section of the examination the Faculty desire to make some remarks.

Surgical pathology.—The Faculty are in entire agreement with the inspector in the view that surgical pathology should be given a prominent place in all examinations in systematic surgery but they consider that his remarks on this subject, in so far as they reflect upon the examination in surgery in the University of Edinburgh, are of too sweeping a character and are hardly justified by the facts of the case. He states that in the written paper no question on surgical pathology was asked. It appears to the Faculty that the second question has a very direct bearing on this branch of

study. The Faculty have, however, looked further into the matter, because, with the inspector, they believe it to be one of much importance. They have had under review the examination papers on systematic surgery for some years back and these confirm the opinion of the Faculty that surgical pathology has always formed an integral part of the examination. A list of the specimens which were used in the oral part of the examination is appended and from this it will be seen that the ground covered in this department of surgery is both varied and wide. In connexion with this subject it should be borne in mind that every candidate has at an earlier period of his course passed an examination in pathology, which includes general surgical pathology and morbid anatomy. In the case of certain examining bodies these subjects are taken only as a part of the final examination.

Operations on the cadaver.—On this matter also the Faculty find themselves to some extent in general agreement with the inspector; but in Edinburgh, as in London and in other schools of medicine, the supply of subjects is barely sufficient to meet the requirements of the teachers. The Faculty believe and act upon the principle that it is more advantageous to use the material at their disposal in rendering the instruction efficient than to reduce the teaching material by imposing a test the value of which is not recognised on all hands. In connexion with this matter, the Faculty desire to say that they have learned with satisfaction that the General Medical Council have at present under consideration the important question of an extension of the supply of subjects, and have memorialised the Privy Council in regard to it. When the efforts of the Council in this direction are crowned with success, and every school is assured a supply of subjects equivalent to its wants for all purposes, the Faculty will not be behindhand in instituting a thoroughly effective test in operative surgery upon the cadaver. But it must be understood that the test referred to in this section of the report is not the only one in operative work to which the candidate is subjected in the University of Edinburgh. He is also stringently examined in this branch of surgery in the course of the clinical examination, and if reference be made to the report it will be seen that this part of the examination is commended. The inspector says: "Cards had been prepared on which two operations had been specified. On one of these operations the candidate was closely examined as to the marking out of incisions, the structures concerned, stages, &c. For the other he was told to write out a list of all the instruments required, and (in many instances) was questioned as to the manner in which they were used. The operations were well selected as tests—e.g., ligature of the large blood-vessels, exposure of the large nerves, operations on the gall-bladder and ducts, other abdominal operations, excisions and amputations. No operations of a trivial kind were asked for."

Surgical anatomy.—The Faculty consider that the remarks which the inspector makes on the examination in surgical anatomy are not warranted and they believe that they result from a misapprehension on his part of the important place which this subject holds in the instruction and examinations of the University. There are few teaching and licensing bodies in which applied anatomy receives more attention. At three different stages the candidate is examined in this branch of study. At the end of his third year, as a recognised and necessary part of the second professional examination, the student is subjected to a searching examination on the surface anatomy of the living model. At the clinical examination surgical anatomy is again an essential part of the test imposed and in the paragraph of the report quoted above the manner in which this examination is carried out is recommended. Lastly, it forms a part of the systematic examination and it is here that it comes under criticism. The inspector states that he is not familiar with the method of examination employed; that it consisted mainly "in requiring the candidate to indicate the position of three structures previously selected"; that when the candidate pointed out these correctly "no further questions were asked"; that in some instances the "candidate's voice was never heard"; and that in cases where "the candidate was unable to indicate the position of the structures required, further questions were put." The Faculty take a different view of this matter. The examination is a practical one. In testing the knowledge of a student in surface anatomy they regard verbal descriptions as being of comparatively little value, as savouring of the book rather than indicative of practical knowledge. An experienced examiner, by requiring precise demonstration from the candidate, can very quickly judge whether he has given sufficient attention to the form and structure of the human body in their relation to clinical work; and taking into consideration the tests in the same subject to which the candidate has been previously subjected, three well-chosen questions will generally tell the examiner all that he wants to know.

Over-liberality in marking.—While not prepared to agree with the inspector that such was the case, the Faculty will not fail to communicate to the examiners the view which is expressed by the inspector on this point.

Time devoted to the oral examination.—The inspector expresses the opinion that the time devoted to the examination in systematic surgery is too limited. The Faculty do not agree with this view and consider that the inspector, in giving expression to it, should have brought out more clearly in the report that each candidate at the oral part of the examination appears on three separate occasions before the examiners and that the time given to each candidate is fully equal to that devoted to the clinical examination which at the hands of the inspector receives unqualified approbation.

Suggestion by the inspector.—The inspector suggests that additional examiners in systematic surgery should be appointed. The Faculty are inclined to agree with this suggestion. A committee of the Faculty has been considering during the last year the whole question of surgical teaching and examination in this University, and an increase in the number of examiners in systematic surgery is one of the points which has been under discussion.

D. J. CUNNINGHAM, Dean of the Faculty of Medicine.

APPENDIX.

SYNOPSIS OF SPECIMENS PLACED IN EXAMINATION ROOM, ON ONE OR MORE OF WHICH EVERY STUDENT WAS EXAMINED IN HIS ORAL EXAMINATION.

Diseases of bones and joints.—Fractures and dislocations. Infective diseases—acute and chronic. Tumours of bones. Deformities (Hammer-toe. Hallux valgus. Hallux rigidus. Flat-foot). Melon-seed bodies. Loose bodies from joints. Rheumatic affections.

Congenital deformities.—Casts of varieties of club-foot.

Diseases and injuries of head and neck.—Fractures of cranium. Antral disease. Salivary calculi. Epithelioma of lip and tongue. Thyroid tumours. Cystic tumours.

Diseases and injuries of the thorax.—Mammary tumours. Ribs removed in empyema and in Estlander's operation.

Diseases of abdomen.—Pyloric stenosis. Gastric ulcer. Gall-stones. Tubercular disease of intestine. Malignant disease of rectum. Annular stricture of intestine. Casts and moist specimens of all varieties of hernia. Stricture of urethra. Urinary calculi. Diseased conditions of kidneys, bladder, prostate, and testicle. Hydrocele. Varicocele. Hæmatocele. Epithelioma of penis.

Diseases of blood-vessels.—Aneurysm. Varicose veins. Nævi. Phlebitis. These are given as examples. There are often duplicate specimens of many of these conditions. There were always about 50 preparations in the room and they were frequently changed during the examination. Almost every condition coming under the title of surgical pathology was available for examination purposes. The entire surgical museum in an adjoining room was at the disposal of the examiners.

III.—REPORT BY THE EXAMINATION COMMITTEE ON THE INSPECTION OF THE FINAL EXAMINATION IN SURGERY OF THE UNIVERSITY OF EDINBURGH IN 1904 AND 1905.

The report by the Examination Committee on the report by the visitor and inspector on the final examinations in medicine, surgery, and midwifery of the University of Edinburgh in 1904 was received and entered on the minutes of the General Medical Council on Saturday, Nov. 26th, 1904. The discussion on this report, however, was adjourned to Monday, Nov. 28th, 1904. It was then proposed by Sir Patrick Heron Watson and seconded by Dr. McVail on behalf of the Examination Committee:—

"That the recommendation of the Examination Committee contained in the report be adopted."

The recommendation in question was as follows:—

"As the difference of opinion between the visitor and inspector, on the one hand, and the University on the other, is fundamental as to the nature of the surgical examination, and as the visitor and inspector have not given any detailed evidence in support of their adverse criticism and as some of the statements of opinion by the visitor and inspector are irreconcilable with each other, this committee recommends that the Medical Council should direct that a further inspection be made of the surgical part of the final examination in the University of Edinburgh."

The recommendation was adopted by the General Council in the following terms.

"That the Council direct that a further inspection be made of the surgical part of the final examination in the University of Edinburgh during the year 1905."

Professor Howard Marsh, M.A., M.C., F.R.C.S., was appointed as inspector and the further inspection was conducted by him alone, without a visitor, in May, 1905. Professor Marsh's report is to be regarded as supplementary to the first report which appeared on the minutes of Nov. 28th, 1904. It deals exclusively with the surgical part of the final examination for the degrees of M.B. and Ch.B. of the University of Edinburgh.

The examination in surgery in the University of Edinburgh is divided into several sections.

The first of these sections inspected by Mr. Marsh was that of clinical surgery. This committee notices with pleasure that he reports that the examination in clinical surgery was such as to insure a sufficiently high standard as to both theoretical and practical knowledge and has therefore come to the conclusion that any weak points in the examination to which the former inspector and the visitor in 1904 drew attention have been amended.

The sections in systematic surgery (written and oral) were next inspected; and regarding these the inspector reports as follows:—

"The written paper consisted of five questions, only four of which were to be answered. The questions had reference to important subjects; but they were limited exclusively to symptoms and treatment, and no pathology was asked. The answers were for the most part satisfactory, and showed that the candidates were well educated and had received sound instruction in practical surgery."

The University states that surgical pathology is included in the examination in general pathology. The Examination Committee is of opinion that surgical pathology should be included in the final examination and are glad to find that the Faculty of Medicine is in entire agreement with the inspector in the view that surgical pathology should be given a prominent place in all examinations in systematic surgery. This committee is of opinion that two examiners are insufficient for the conduct of the written and the oral examination. Since surgery includes diseases of the eye and ear it appears to the committee that the four answers required did not adequately test the knowledge of the candidate, and that ten minutes of oral examination did not afford time for ascertaining the information he possessed. The arrangement of the surgical anatomy and operations examination in these subjects is fully described by the inspector and it is shown that 75 per cent. of the candidates were not examined in operative surgery at all. Of the 25 per cent. who were selected by lot to perform operations the majority showed only limited skill. On the other hand it is to be noted that the inspector in 1904 advised that it would be better that candidates should not be called upon to perform operations on the cadaver at all. In surgical anatomy only one examiner, with an assistant, was present.

The inspector of 1905 states that the examination in surgical anatomy was conducted in a manner with which he was not familiar. He did not regard the examination as an adequate test, considering it altogether too brief. The practical surgery section (use of splints and apparatus for the treatment of dislocations, fractures, &c.) was well conducted and apparently quite satisfactory. The inspector of 1905 reports, in conclusion, that the final examination in surgery of the University of Edinburgh, regarded as a pass examination in surgery, is "sufficient." The Examination Committee is of opinion that the examination as a whole was sufficient.

Nov. 30th, 1905. PATRICK HERON WATSON, Chairman.

Sir P. HERON WATSON moved that the report be approved. Dr. MCVAIL seconded the motion.

Sir THOMAS FRASER said that he thought he might be justified in saying that they in Edinburgh had noted that the two examinations had brought out views on the part of the experts representing the Council that were quite satisfactory in regard to midwifery, medical jurisprudence, public health, and medicine. There had not been the same favourable opinion expressed with regard to surgery but he would point out that those doubtful points concerned minor details only. He observed that in the visitation of 1904 a favourable opinion was expressed regarding the examination in systematic surgery but the report was not so favourable in regard to clinical surgery. In the last report the position was entirely reversed. He did not wish to exaggerate the importance of the matter because it was not surprising that opinions in regard to details should be different. He was well satisfied with the report and it would serve no purpose to deal with further criticisms.

The motion was agreed to and the report approved.

Students' Practical Midwifery Committee.

On the motion of Sir JOHN WILLIAMS, seconded by Dr. NORMAN MOORE, the report of the Students' Practical Midwifery Committee was received and entered on the minutes.

The committee reported that replies had been received from a large number of teaching bodies as to their requirements in regard to the teaching of midwifery to students, but some answers were only sent in quite recently. Though these had been set in order and printed the committee felt that it would be impossible to present an adequate report on the mass of information before them within the limits of the present session. They therefore requested that their reference might be extended until the next session of the Council.

Pharmacopœia Committee.

The Pharmacopœia Committee reported as follows:—

From May 23rd, 1905, to Nov. 21st, 1905, the sales of the British Pharmacopœia (1898) were 634 copies. Up to the latter date 37,068 copies of the Pharmacopœia and 4410 copies of the Indian and Colonial Addendum have been disposed of. In accordance with the direction of the President an impression of 3000 copies of the Pharmacopœia was printed during the summer. The stock remaining on hand now numbers 2964 copies and this will meet the ordinary demand for about two years to come. The Committee of Reference on Pharmacy is now fully organised and is engaged in various researches bearing on the revision of the Pharmacopœia. Communications have been received through the Colonial Office from 29 Colonial Governments and administrations, many of which contain valuable information on the pharmacopœial requirements of distant parts of the empire. The new Pharmacopœias of the United States and of Spain have been received. The committee observe that in these the conclusions as to the strength of potent preparations, which were, with the Council's approval, embodied in a recent international agreement, have been accepted and followed.

On the motion of Dr. NORMAN MOORE, seconded by Sir JOHN W. MOORE, the report was received and entered on the minutes.

Sir JOHN BATTY TUKE intimated his resignation as a member of the Pharmacopœia Committee. He said that there had joined the Council this session a gentleman of high authority and world-wide reputation in all matters connected with pharmacopœias and whose collaboration with the committee would be of very great importance. He moved that Sir Thomas Fraser be appointed in his place.

This was seconded by Sir JOHN W. MOORE and agreed to.

The PRESIDENT acknowledged the valuable services that had been rendered by Sir John Batty Tuke.

Vacancy in the Education Committee.

Sir JOHN WILLIAMS was appointed to fill the vacancy on the Education Committee caused by the retirement of Dr. Windle.

Procedure in Penal Cases.

Mr. MORRIS moved:

That it be referred to the Executive Committee, in consultation with the legal advisers of the Council, to consider and report on the following proposed amendment to the Standing Orders, Chapter XIV., 6:—"With the notice of inquiry the solicitor shall send an intimation that copies of any statutory declarations received in support of the charge will be supplied free of cost on the application of the accused person."

He thought it was distressing that some of the persons concerned in penal cases should not have the least notion as to who were going to be witnesses against them or what kind of evidence was being brought.

Dr. MCVAIL seconded the motion which was agreed to.

Application for Registration.

The Council considered an application for registration by Mr. Robert Oates, M.B. Univ. Aberd. 1853, Lic. R. Coll. Surg. Edin., 1853, a medical practitioner entitled to be registered under the Medical Act (1858), but who neglected to effect such registration until after the "appointed day" (June 30th, 1887) under the Medical Act (1886). The Branch Council recommended that Mr. Robert Oates be registered.

On the motion of the PRESIDENT the recommendation was agreed to.

Glasgow Degree of B.Sc. in Public Health.

The Council considered an application from the University of Glasgow for the recognition of its newly instituted degree of B.Sc. in Public Health.

Dr. BRUCE said that the Public Health Committee, on considering the application, observed some ambiguity and brought the matter before the authorities in Glasgow. The committee met again that day and after carefully considering the regulations for candidates for the degree of B.Sc. in Public Health in the University of Glasgow it recommended the Council to approve of the regulations subject to a satisfactory assurance being given by the licensing authority that no student would be allowed to proceed to any part of his examination until a period of 12 months had elapsed since he received a registrable qualification to practise.

Sir THOMAS MCCALL ANDERSON stated that he had written to the clerk of Senate who replied that they had never had a candidate offering himself for examination within 12 months of his graduation.

The PRESIDENT said that as a matter of fact one of the regulations which the Council regarded as essential for the recognition of diplomas in public health had not yet been embodied in the regulations of the University of Glasgow and he did not think they could pass at that moment a final resolution on the subject; but if the Executive Committee were to be informed in February that the regulations were in all respects in accordance with the rules of the General Council action could be taken without waiting to the May session.

Dr. BRUCE moved that the Executive Committee on being satisfied that the rules of the University of Glasgow with regard to degrees in public health were in accord with the rules of the General Council be authorised to approve the degree as a diploma in public health.

Sir JOHN W. MOORE seconded the motion which was agreed to.

Students' Registration Committee.

On the motion of Sir HUGH BEEVOR the report of the Students' Registration Committee on exceptional cases was received and entered on the minutes.

Irish Poor-law Medical Service.

Sir WILLIAM THOMSON moved:—

That a committee be appointed to consider and report to the Council at its next session on the following matter: That a grave danger to the public health in Ireland has arisen from the present condition of the Irish Poor-law medical service and that the committee be instructed to report on the disabling circumstances under which registered medical practitioners are compelled to fulfil their public professional duties.

He said that this was a matter to which the Council ought to give the most careful consideration. The subject was one that for many years had been in the forefront of medical considerations in Ireland; indeed, the profession in Ireland felt that the whole existing system of Poor-law medical relief in the country was one which was directly detrimental to the public health. That was the statement he made in the motion and he should have to justify it if he were to have the support of the Council in referring the matter to a committee. It concerned a body of men numbering not less than 800, nearly one-third of the whole professional population of Ireland and spread over the whole country. Therefore the Council would see how interesting this was, not only to the body immediately connected with the service but to the profession in general, which naturally sympathised with their brethren who in their service to the public had to make bricks without straw. This body of medical men was charged with the duty of attending to the sick poor who were unable to pay for any service of the kind whatever. They were remunerated by salaries ranging from £80 to £140 a year and they were allowed to practise. Shortly, these were the conditions. In addition they had to perform duties as officers of public health, for which they received a very small remuneration. Now, what had these men to do for that? Of course, in the larger towns the amount that could be received from private practice was sometimes very considerable and in such cases the permission to engage in private practice was thus a great benefit, but in the outlying parts of the country, particularly in the west and south-west and north-west, a

very different condition of things existed. They entered at once into what were known politically or popularly as the congested districts. That phrase had become very familiar to the public at large and it meant practically this, that there was in the district no resident landlord class and no resident shopkeeper class and that the whole country—these bare mountain sides and bogs—was occupied by poor people who had not got a halfpenny outside what was required for the very barest necessities of life. A man was put into the charge of a district like that which sometimes included besides a patch of mainland a number of islands several miles out in the sea. He was given £100 or £130 a year and told, "You are to work the whole of that district and you are to attend to every sick call, night and day, no matter whether it is on the mainland, on the top of a mountain, or out in an island in the Atlantic." If they asked one of the people who supported this system, "How can the man get to the end of his district of, say, 25 miles in one direction?" the reply would be, "He can get there as best he can; we give him £120 and that is enough for him." The members of the Council had all gone through life a bit and knew how far £120 or £150 would go in supporting a man and his wife and children, without taking into account the providing the horse and car or other means of taking him about in the discharge of his duty. A man in such a district had no private practice. Some years ago he (Sir William Thomson) inquired very fully into this matter and consulted upon it all the dispensary medical men in the country. He asked them, confidentially, of course, "How much do you make outside your official salary?" Some of them said, "Well, in a good year I make £10 or £20;" and another man answered that he lived upon the hope of catching some unfortunate tourist from whom he might receive £5. That was not an exaggerated story; it was what really existed. Now supposing that a man had spent 30 or 40 years in this service and began to feel that the burden of the day was too much for him and that he needed some rest. What happened? The public service in Ireland provided no pension for a medical man because it was permissible to the board of guardians which made the appointment to give a pension. That looked very straight; at first sight it did appear that there was an element of fairness in the arrangement, but the guardians insisted that before the question of a pension was considered the man must resign first; in other words, the monstrous condition was that the man must give up every claim upon his masters, must place himself absolutely at their mercy, and receive at the end what they were pleased to give him. The remarkable and horrible end of the story was that in many of these cases, the cases of utterly broken-down men who had been compelled to place their resignation in the hands of the guardians, no pension whatever was given and they were thrown upon the world. Even sometimes these men, who started life with just the same hopes as members of the Council did, ended their lives in the poorhouses and were attended by brother medical men as ordinary paupers. The other side was this. A man would say, "I am too well acquainted with the generosity of boards of guardians to venture upon a test of it and therefore I am not going to resign; I will hold on." And the result was that such men did hold on. He had records of medical men of 80 and 85 years of age who had in their control the discharge of all the medical relief of the poor in districts in which they had to travel from 30 to 40 miles. The Council could imagine at once how the public medical service was managed by practitioners who had arrived at that age. It was impossible to conceive that the duties could be properly discharged. There it was that the danger to the public came in. This was a state of things which only the ignorance of it could permit to exist. There was another point. He had asked some of these officials "How do you arrange about a holiday?" The answer was in one case, "I have not had one for 30 years, and if I got one I could not afford to take it because I live on my salary." But if they said to a board of guardians "This man needs a rest," the guardians would say, "Quite so; we will give him a holiday if he pays for it. He must provide someone to do his duty in his absence." That was not, in a sense, absolutely true because after the exposures that had been carried on year after year by the profession, in Dublin particularly, the Local Government Board for Ireland had insisted that a man shall have a right to refrain from duty at all events for four weeks, but it had not yet been made compulsory upon the guardians that they should pay the substitute and so the guardians were fighting over the question who should pay the money—they or the medical man. Of course, this also reacted upon the efficiency of the service. Therefore, he contended upon the whole matter that the system needed the closest investigation and the most profound reform. During the last few years there had been a crisis; matters had almost issued in a medical strike. He was gratified that on what might be the last occasion on which he would be present at a meeting of the Council he had been able to raise the question and he hoped that the Council would accede to his request.

Sir VICTOR HORSLEY said he felt that he was specially honoured in being asked to second this resolution and he also felt that inasmuch as the facts had been so eloquently placed before them it was rather his duty, instead of dealing further with the facts, to show why this Council should take up the work which Sir William Thomson suggested. The proposed committee would not have to find its facts. Sir William Thomson's own report, published a number of years ago, gave the facts in a most complete form and the more recent report of the British Medical Association would furnish along with Sir William Thomson's report all the material that the committee might require. He therefore turned to the broader issue. What could this Council do in the matter? Well, he thought it could really apply the concluding stroke in the fight which had already been going on for so many years. The Council was statutorily the intervening body between the central government and the public in medical matters. In that sense it was the guardian of the medical profession, and he thought that when a difficulty of this kind arose in a section of the profession it was the duty of the Council to approach the Government so soon as it had made up its mind that it could do so practically. It could only make up its mind after it had received the report of a committee and therefore he hoped the Council would appoint the proposed committee. But he thought that there was another issue. This Council in its statutory position demanded from every medical practitioner that he should spend five years of his life and a considerable sum of money in obtaining a certain degree of knowledge. Seeing that the Council did so it was morally bound to help those who qualified themselves in their labours afterwards. The Council was not merely charged with the duty of punishing these men when they offended but were charged with the perhaps more honourable duty of supporting them when they were in real difficulty. This was such an occasion. But the question of how that support could be given could not be answered until a committee had investigated the subject. The medical profession in Ireland had tried and failed to make any serious impression and while it was true that the British Medical Association was also working in the matter he felt that as it was a question between the Government and the public the Council would be well advised to take it up. In conclusion, he said that although he regretted extremely that he should not be present to take part in the discussion of the report of the proposed committee he would have the pleasure of reading it and he could only express the hope that the Council would receive the report favourably.

Sir CHRISTOPHER NIXON said he was in entire accord with Sir William Thomson. The motion came very naturally from Sir William Thomson as the Direct Representative of the profession in Ireland. He should also like specially to thank Sir Victor Horsley for the part he had taken in the matter and to say that every member of the Council would most deeply regret if the speech to which they had just listened was to be regarded as Sir Victor Horsley's "swan's song." It would be impossible to estimate the loss which the Council and the profession would sustain if he retired from the Council, the work of which had been so much influenced by him. Therefore, he (Sir Christopher Nixon) sincerely trusted that Sir Victor Horsley would reconsider his decision. In reference to the motion he thought that having due regard to the susceptibilities of the local bodies it would be possible to find some *via media* by which the condition of these Poor-law medical officers would be ameliorated.

Mr. JACKSON questioned whether it was in the power of the Council to take the matter up.

Sir JOHN W. MOORE said that the deplorable condition of these men had been before the Royal College of Physicians of Ireland over and over again. It should not be thought

that the Irish licensing bodies had lost sight of their Licentiates. While, however, he was going to vote for the committee he was not at all sanguine that much would come of it. He did not see what the Council could do so long as these appointments were eagerly sought after.

Sir THOMAS MYLES remarked that from what he had witnessed himself he could assure the Council that Sir William Thomson's statements were no exaggeration.

Sir JOHN WILLIAMS said that so far as he could see the Council had no *locus standi*. He was afraid the Council, although properly most sympathetic, had no right as a body to interfere.

Sir P. HERON WATSON considered that the statements made were one of the most horrible disclosures he had ever heard. But if things were so bad why did not these men go elsewhere? The colonies were large enough.

Dr. BRUCE supported the motion. The state of things was almost as bad in the Island of Lewis.

Dr. SAUNDBY also concurred in the proposal.

The PRESIDENT said that he should like to say that the motion, as a motion, was in order, because any member could move for a committee. But there was a second question which should be deliberated carefully upon. Was this proposal within the statutory functions of the Council? He was afraid there was not a *prima facie* case on which the Council could take action. Of course, he did not on such a question rule one way or the other.

Dr. PYE-SMITH said that he must vote against the proposal solely because he considered that the Council was incompetent to deal with the question.

Dr. NORMAN MOORE, while expressing sympathy, took the same view.

Sir WILLIAM THOMSON thanked the Council for the very sympathetic way in which the motion had been received. The tone of the discussion would give great satisfaction to the profession in Ireland. Perhaps it would be better, in view of all that had been said, to hang up the matter until they got a report from the law officers as to the competence of the Council to deal with the question. He should like to ask whether, if a Bill were introduced in Parliament dealing with the subject, it would be competent for the Council to express an opinion upon the clauses.

The PRESIDENT said that if such a Bill were submitted and if it touched in any way upon the qualifications of these officers he should be bound to refer it to the Public Health Committee. He would also say that if the matter were dropped now he should take an opportunity of consulting the legal officers on the question whether it was within the power of the Council to appoint a committee for such a purpose. In the meantime there was nothing to prevent the Irish Branch Council considering the question if they were pleased to do so.

Upon this understanding the motion was by leave withdrawn.

The Penal Cases Committee.

Dr. FINLAY moved:—

That it be referred to the Executive Committee, in consultation with the legal advisers of the Council, to consider and report to the next meeting of the Council whether the standing orders affecting the Penal Cases Committee should not be amended by the omission of Subsection II., Chap. IX., p. 19, or alternatively whether any change should be made in the constitution of the said committee.

It was resolved to discuss this proposal *in camerâ*.

This concluded the business of the session and the Council adjourned till May next.

MEDICINE AND THE LAW.

The Status of the Expert Witness.

AMONG the more serious arguments brought against the admittance of forensic testimony by experts is the allegation that these witnesses actually usurp the function of the petty jury who alone, according to the legal procedure of our courts, have the privilege and the duty of deciding as to the facts in issue in a given case. Hence it has been affirmed that expert witnesses would be located more correctly in the jury-box than on the witness-stand. Mr. Justice Bucknill at the recent Leicester assizes raised this point, whereupon certain intended expert testimony was not heard. A single woman had been found dead as the result of a great loss of blood consequent upon some severe gashes in her neck; her lover was charged with having slain her, although it was not patent whether the injuries had been inflicted by suicidal or by homicidal means. It was given in evidence that the severest cut must have been made by a knife being drawn from the left to the right side of the neck, whereas the blood-stained knife was deposited by the dead woman's left hip. The two medical practitioners who were present at the post-mortem examination of the body of the deceased agreed in the opinion that the wounds were probably not self-inflicted. The prosecution then proposed to examine an expert medical witness who had not seen the deceased woman but who, however, had perused the depositions taken down by the coroner and had heard all the evidence of fact and opinion then and there already adduced. Before he had commenced to propound his views upon the circumstances of the case as revealed by the facts in evidence Mr. Justice Bucknill raised an objection to hearing his opinion as to the cause of the mutilation, for this was the very point, he thought, which the jury had been empaneled to decide. The prosecution, upon the learned judge's advice, did not press the claim and the witness was withdrawn. In a comment upon the *locus standi* of the expert witness called in this case it has been noted that really there were two very distinct questions of fact which remained to be decided, one as to the actual cause and mode of death, and the other as to the causer of the death. To answer the former question with any reasonable certainty a considerable skill and experience in surgical anatomy would be essential, far more, indeed, than a common jury could be expected to have or to acquire under the instruction of learned counsel; this technical question having been answered to the effect that the wounds were not suicidal but homicidal it would remain to say whether or not it was the accused person who in fact caused the fatal injuries. To give a reply to this latter question is the legitimate province of the jury.

A Witness's Refusal to Give Evidence.

At the Greenwich police court recently a clergyman was committed to prison for seven days in circumstances of considerable interest to medical men who may find themselves situated as he was. A woman was before the court on a charge of larceny and the clergyman who was present, having been served with a subpœna, was apparently believed to have had some confession or admission made to him by the prisoner who had been in his service. He refused, however, to be a witness on the ground that as a priest he could not divulge what she had told him. Mr. Kettle referred to the Summary Jurisdiction Act, 1842, and read to him the provision that "in the event of a witness refusing to give evidence, either in obedience to a subpœna or warrant, the presiding magistrate has power to commit him to the house of correction for a period not exceeding seven days," and then as the reverend gentleman still maintained the position he had adopted, he was sentenced to be imprisoned as has been stated. However correct the learned magistrate's interpretation of the law may have been, its enforcement where a clergyman owing to his profession, or a medical man from the same cause, has become possessed of a secret which he considers it his duty to guard, inflicts great hardship. In the case of medical men the knowledge that the person from whom he seeks relief will perhaps be compelled to bear witness against him may at any time deter a person with a guilty conscience from seeking medical aid even when his life is in danger, and so a penalty may be inflicted upon him far in excess of what his fault deserves. Both the clergyman and the medical man in their refusal to give evidence, if they do refuse, suffer because they hold it to be their duty as honourable men to remain silent, and also because as honourable men they are above the falsehood which would save them from any penalty. In many instances, if not in most, a denial of all knowledge or of all recollection of facts relevant to the case could not be controverted, and the unscrupulous person, possibly a friend or accomplice of the supposed criminal, who will commit a simple act of perjury is consequently in a better position than a truthful and honest man to whom the prisoner may be practically a stranger.

KING'S COLLEGE HOSPITAL REMOVAL FUND.—The offices of the King's College Hospital Removal Fund have been removed from King's College to King's College Hospital where it is requested that all communications may be addressed.

THE LANCET.

LONDON: SATURDAY, DECEMBER 9, 1905.

Errors in Diagnosis of Notifiable Diseases.

THE question of errors in the diagnosis of infectious diseases, more especially where removal to a fever hospital results, is one of great importance alike to the public and to the practitioner of medicine, especially in urban districts. We have received a copy of a report on this subject presented to the mayor, aldermen, and councillors of the metropolitan borough of Paddington by Dr. REGINALD DUDFIELD, the medical officer of health, which affords some interesting facts for discussion. On collecting the statistics of the Metropolitan Asylums Board for the five years 1900–04 regarding the admission of "fever cases" other than small-pox it is found that among 108,776 cases there were 10,085 wrongly diagnosed, giving a percentage of 9·2. The figures for the three principal diseases—viz., scarlet fever, diphtheria, and enteric fever—are also instructive. Thus the percentage of errors in cases of scarlet fever varies in different years from 4·7 to 6·7, that of diphtheria from 8·3 to 16·1, and that of enteric fever from 18·2 to 25·9. As might have been expected from its short prodromal period and the early appearance of the rash, scarlet fever affords the smallest percentage of errors, although the cases of scarlet fever constitute usually more than half of the total admissions. By analysing the statistics of the Board Dr. DUDFIELD finds that measles, German measles (rötheln), tonsillitis, and erythema are the diseases with which confusion most frequently occurs, although it is not clear exactly what disease is meant by erythema. In regard to enteric fever, diagnosis is admittedly difficult and even under the favourable conditions of a hospital with laboratory accommodation the certain recognition of the disease may be delayed for several days until bacteriological proof is forthcoming or characteristic symptoms develops. Influenza, pneumonia, and tuberculous diseases all contribute to the cases of erroneous diagnosis. The error in cases of diphtheria is intermediate between that of scarlet fever and that of enteric fever but every practitioner knows the great difficulty in separating cases of tonsillitis due to other causes from diphtheria by the clinical features only.

Most of the remainder of Dr. DUDFIELD's report consists of an apologia for the practitioner certifying in error. He points out, in addition to the similarity of many of the features of these diseases to others, the difficulties under which a diagnosis has too often to be made, since in the majority of cases isolation at the patient's home is impracticable and therefore the practitioner has to come to a rapid decision and to act upon it. To illustrate further the difficulties even under the extremely favourable conditions of the isolation hospitals with their specially experienced medical officers he quotes some striking figures given by Dr. F. M. TURNER, the medical superintendent of the South-Eastern Fever Hospital, in the "Medical Supplement" of the last report of the Metropolitan Asylums Board. Dr. TURNER worked out with commendable care the separate records of the doubtful cases received at the hospital. Among 735 cases admitted which were certified as scarlet fever 197 were classed as "doubtful." Of these, 158 subsequently proved to be scarlet fever, leaving 39 actual errors in diagnosis. Similarly 234 out of 551 cases certified as diphtheria were classed as "doubtful," but of these 154 proved to be actually diphtheria, leaving 80 cases of error. It is obviously of the first importance in the interests of public health that infectious diseases should be isolated at the earliest possible moment and from this point of view the doubtful cases which subsequently prove to be actual examples of the particular disease are most dangerous. Referring to Dr. TURNER'S statistics, Dr. DUDFIELD points out that the result of the notification of the doubtful cases there recorded was the prompt isolation of 312 cases of scarlet fever and diphtheria, while 119 patients suffering from other diseases, many of them also of infectious character, received better nursing and care than most of them would have obtained in their own homes.

There is, however, another aspect of the problem with which the private practitioner is more closely concerned than the medical officer of health and that is the interests of the individual patient by whom he is consulted. Certain public responsibilities, such as notification of infectious diseases, are enforced upon the practitioner, and rightly so, but none the less, he is directly concerned in furthering the best interests of his individual patient provided it is not to the actual detriment of the community or associated with an infraction of the sanitary rules. In the case of the well-to-do patient this is not a matter of difficulty since isolation at home may be effectually carried out until the course of the disease or consultation establishes the diagnosis, but in the case of those whose means are limited the difficulties are greater and some action on the part of the practitioner becomes imperative. The whole crux of the matter, therefore, resolves itself into the risks incurred by the patient who is wrongly diagnosed and removed to an isolation hospital. Dr. DUDFIELD is of opinion that the risks of such patients contracting the disease for which they were notified are so infinitesimally small as to be negligible. Statistics on this point would be a valuable contribution to the matter. He concludes that, taking all the difficulties of diagnosis into consideration, the proportion of errors is really a small one, and that it is to the public advantage that nothing should be done to make practitioners hesitate more than they do at present in signing certificates of notification; and he is opposed to the suggestion that the medical officer of health should in every instance examine cases notified to him before their removal, on the grounds that it would be difficult at ordinary times and quite impracticable during an epidemic and that it would imply an uncalled-for slur upon the general practice of the profession of medicine. We agree with Dr. DUDFIELD in regarding this as unnecessary. One of the most gratifying

aspects of the work of the medical officers of health is the uniform tact with which they conduct their often arduous and delicate duties, but the adoption of such a practice as that suggested above would be likely to afford grounds of friction and for a doubtful advantage, since it is admitted on all hands that certainty of diagnosis, even with special experience, is unattainable at present. Dr. DUDFIELD'S report is an instructive document and his arguments are logically worked out.

Old Age.

THE medical profession in general, and the members of the Balneological and Climatological Society in particular, have lately been indebted to Dr. G. W. HAMILTON CUMMING of Torquay for a pleasant dissertation upon the influence of climate on old age and senile diseases; and a highly interesting and suggestive article on old age itself was contributed to our columns in our issue of Dec. 2nd, p. 1614, by the eminent veteran Sir SAMUEL WILKS. We learn from the Medical Register that Dr. CUMMING obtained his first qualifications in the year 1879, and we may therefore safely congratulate him upon the fact that his knowledge of old age has as yet been derived only from his observation of its occurrence in others and that his personal experience of it is yet to come. We cordially wish that he may have long to wait and we do so on the ground that old age implies the presence of factors other than the mere passage of time. Sir ANDREW CLARK was accustomed to define it as "the period at which a man ceases to adjust himself to his environment," and to illustrate the definition by a reference to medical practitioners of his own or of a somewhat earlier date, who were unable to assimilate and to apply the teachings of bacteriology. Dr. CUMMING'S view is that, "as a matter of fact," old age commences just whenever the vascular apparatus begins to fail, and no sooner; and he tells us that nothing is so true, nothing so useful from a clinical point of view, as the aphorism "a man is only as old as his arteries." In other words, he may be said to recognise that the arteries may sometimes be older than the man; and this recognition once more discharges mere time from any over-ruling position in the question. Dr. CUMMING, almost of course, quotes the saying that a man is as old as he feels and a woman as old as she looks, but neither clause of the sentence is of more real avail than the account of herself given by a lady to the census enumerator, to the effect that she was "as old as other people." It is quite possible for a man not to feel very old and yet for his brain to be absolutely impenetrable, if not by microbes, at least by ideas about them. Both Dr. CUMMING and Sir SAMUEL WILKS give excellent descriptions of the ordinary sequence of events as life advances. They describe old age not as a disease, but as a simple atrophy in which the capillaries wither, so that many of the tissues are ill-supplied with blood; in which the glands and tissues which act as manufactories for that fluid suffer from want of supply, so that the quantity and quality of the blood itself become degenerate; in which the enfeebled respiration prevents perfect oxidation; and in which the excretory organs fail to do their duty. In these circumstances Dr. CUMMING believes a "relaxing" climate to be favourable to old age and to be conducive to the amelioration of the symptoms which sooner or later accompany it. He compares such a climate to a "warm but light top-coat" which can never be left at home. Day and night it clothes the shivering body; the warm moist air bathes and soothes the pulmonary mucous membrane, lessening the tendency to bronchial affections and keeping the remaining vessels of the skin in such gentle and continuous dilatation as to diminish the work both of the kidneys and of the gradually failing heart. It may be said to create an environment in which inevitable changes are productive of the minimum of danger or of discomfort.

Sir SAMUEL WILKS declares his agreement with Professor OSLER in the opinion that all the greater activities within us generally cease at the middle period of life, which he puts at 50 years of age, and he asserts that occupation may be considered as "one of the necessities"—that is, one of the essential conditions—of long life. He explains the effect of occupation by saying that it is the best method of obtaining a good supply of blood for the working organs but, notwithstanding the fulfilment of this condition, he thinks that the work done after 50 years of age is seldom original or new but is mainly a turning to account of previously acquired knowledge for the benefit of others, as was done "by the Nestors of old." Even so it is surely not an unimportant function. NESTOR not only guided the chariot of TYDEUS but he withdrew the hero from a contest in which his strength and courage would have been unavailing.

A true philosophy of old age should, we think, be carried somewhat farther than has been done by either of the writers whom we quote, and should extend to some consideration alike of the organs and of the conditions in which senile capillary atrophy commences and is continued. The first named are primarily the brain and the great excretory glands; and the conditions are those of cessation of normal activity in the former and of overwork in the latter. The overwork is probably by far the more important of the two. It has been well said that men "dig their graves with their teeth"; often, it might be added, with artificial ones. Prosperous members of the trading community die at the age of 60 years or thereabouts; first, because they have ceased to think, and secondly, because they continue to eat and to drink in excess of the requirements of their bodies. Remarkable longevity, with complete retention of mental activity, is mainly found in men of high intellectual endowments who have become dependent upon the exercise of those endowments for their chief pleasures and whose minds have not been crippled by confinement within grooves. With them, as with all others, "time and chance" may intervene and their lives may be cut short by accident, by infection, or by habits. Allowing for such exceptions, longevity is one of the ordinary rewards of eminence in mathematics, in philosophy, in science, or in law. In a different form it is found in rural districts among the industrious poor (especially among poor women), whose brains, indeed, have never been exercised except upon the simplest problems but who have led mainly outdoor lives in pure air and who have been protected by their poverty from over-eating or from over-drinking. The ordinary examples

of premature death, preceded by premature old age, are furnished by persons whose occupations have never required any serious intellectual effort, who have, perhaps, learnt some business the guiding principles of which were converted into routine by the time they were 30 years old, who thereafter ceased entirely from any employment of the higher faculties of their minds, and who have always eaten and drunk with more reference to the gratification of the palate than to the physiological needs of the system. The names of such persons are legion and they are written day after day in the obituary columns of the newspapers. Their friends mourn for them and regard them as having led useful and honourable lives; but their claims break down under the scrutiny either of the physiologist or of the philosopher.

Dr. CUMMING tells us that in Torquay, in a population of 33,625 persons, there were 1655 who had reached or exceeded the age of 70 years in 1901; and he says that he felt some surprise in discovering that Torquay was not more favoured, in respect of the longevity of its inhabitants, than some other parts of the country. We have not immediate access to the 1901 figures as regards 70 years or more, but the proportion in England and Wales of persons over 60 years was 74 per 1000. Of these, therefore, Torquay should have contained 2488; and the figures look as if 833 of the population, who had weathered the dangers of childhood and adult age and had attained to the respectable position of sexagenarians, had nevertheless died before reaching 70 years. According to the English Table of Expectation of Life (No. 3), out of 1,000,000 children born the survivors at the age of 60 years would be 182,350 males and 187,477 females, of whom, ten years later, there would be left 114,370 males and 123,607 females, or a total of 237,977. In this proportion, the average of deaths among 2488 sexagenarians before they reached 70 years of age would be 1057, or definitely in excess of the mortality in Torquay. "Nothing," said the second Sir ROBERT PEEL, "is so misleading as facts, except figures," and we do not pretend to attach any particular weight to the foregoing calculation. But it shows, if it shows anything, that apart from climate there may possibly be conditions in Torquay which, on the whole, are favourable to longevity; and if so, we should look for them rather in the character of the population than in any conditions of climate or natural surroundings. If the brain be kept at work the conditions of its activity will require the maintenance of its blood-supply and will prevent its capillaries from shrinking, and if the great excretory glands are not called upon for excessive effort in the elimination of superfluous food and drink they will seldom prove inadequate to the performance of any duties which the habits of a wise and temperate man would impose upon them. Dr. CUMMING falls into what we regard as an error when he speaks of enabling or assisting his patients "to slide gently down the hill of life," although the error is so common a one, and so much supported by the consequences of many ordinary customs, that it can only be spoken of with a certain degree of indulgence. It is based upon the popular conception of life as an ascent, followed by a long and gradual descent—a conception only realised under essentially unphysiological conditions. The true conception is of an ascent, a level plain, and a precipice; and the healthy and wholesomely living man should have little or no consciousness of descending until the time comes for him to fall.

Personation, Forgery, and Perjury.

AT the recent assizes at Maidstone a man charged under the name of CHARLES WALTERS with forgery of a death certificate and with perjury at an inquest was sentenced to 12 months' hard labour by Mr. Justice GRANTHAM. The case, which was a serious one, was referred to at a very early stage in THE LANCET of Feb. 25th, p. 519. At that time the death certificate had been given, to which the prisoner had appended the name of Mr. ARTHUR PIERCEFIELD WALTERS, a medical man practising in the Hebrides but then having in the Medical Register and Medical Directory an address at Clifton. The prisoner at that time had also sworn at the inquest, which was held in spite of the existence of his certificate, that he was Mr. A. P. WALTERS and had backed up his statement with circumstantial details. It was our note upon the inquest, calling attention to some of its peculiar features, which attracted the notice of the real Mr. WALTERS and it was through the information which he communicated to the police that his impersonator was arrested and brought to justice.

Some of the facts of the case are so peculiar and point to so dangerous a form of imposture that a short history of them may be given. Early in January a man living at Gravesend found in the shop, which was kept by his wife, a man to whom she had been selling a necktie. The stranger seems to have become communicative to the couple, informing them that he was a medical man looking out for a practice, a statement which he afterwards supported by producing a document which appeared to bear it out. He came to lodge in their house on their invitation and though he does not seem either to have made definite inquiries as to a practice or to have attended other patients he gave medical advice to his landlady who had become seriously ill and he continued to do so until her death which took place about three weeks after his arrival. He then certified the cause of death as acute pneumonia, signing his name as "ARTHUR P. WALTERS, M.R.C.S. England and L.R.C.P. London, 41, Cumberland-avenue, Gravesend." Suspicion seems to have been aroused about this time in the mind of the husband as to the treatment accorded to his late wife and the certificate given found its way first into the hands of the police and then into those of Mr. G. E. PENMAN, the coroner for the borough of Gravesend. This gentleman is to be congratulated upon having decided to hold an inquest which revealed the fact that the deceased had died from pleurisy and pericarditis and had also suffered from what the newspaper reporter has described euphemistically as an "accident." He also applied a cross-examination to the supposed medical man which not only made it clear that his conduct was open to considerable question but which also tied him down to a story that could be proved to be untrue. The facts since brought to light show that he was employed as one of the assistant medical officers at the Great Western Railway works at Swindon in 1897 where he called himself RICHARD HARRISON, a name

which apparently at one time appeared in the Medical Register but was removed owing to the address not being correctly given. It was at Swindon that the prisoner acquired the form of death certificate which he afterwards used at Gravesend and also, presumably, the certificate of registration, birth certificate, and testimonials of Mr. A. P. WALTERS, who had been employed some years before in a similar capacity and had apparently left them behind him accidentally. Armed with these credentials and probably fortified by the belief that Mr. WALTERS was still abroad, as, in fact, he had been for some years, his career of imposture must have seemed to him to be fairly safe. Indeed, when we consider that the report of an inquest at Gravesend was not likely to be circulated in the Hebrides or even to any great extent in the London press, it is clear that he would probably have escaped without anything more serious than having to leave the neighbourhood which he had selected had not the gentleman whom he personated been a reader of our column of "Medicine and the Law."

This is not the first time that a dishonest person has assumed the name of an existing medical practitioner and it points to the possibility of serious consequences arising should a death certificate be accepted without inquiry for registration upon which the signature is that of an absolute stranger in the district where it is given. The genuine credentials of a medical man may not often fall into the hands of a fraudulent rascal but as it is always possible that they may do so all candidates for medical posts should willingly supply the fullest particulars with regard to themselves, and those who have such positions at their disposal should not be satisfied without proper investigation of the claims of any candidates making application, after which the documents used should be returned to their owners. The Medical Directory is open to the perusal of all who care to enter a free library and the particulars contained in it can readily be supplemented by the knowledge or the imagination of the sham medical man who is usually a person of some experience in professional matters which he has obtained in a subordinate capacity at a hospital or in the employment of a druggist. We ourselves are glad that by giving publicity to the unusual and suspicious facts revealed at the inquest at Gravesend we aided in bringing a cunning criminal to justice. The proper object of inquiry in open courts of law and of the publication of comments or of detailed reports in the press is not to feed the imaginations of idle-minded readers but to obtain a publicity which will aid, directly or indirectly, in the administration of justice and in the protection of the public.

Annotations.

"Ne quid nimis."

THE RESIGNATION OF THE GOVERNMENT.

To the medical profession, so far as their medical duties are concerned, it is of no consequence which of the two great parties, or what blend of the subdivisions of those parties, is in office. In either case legislation in behalf of the health of the people is what we desire, premising that the best medical service can only be rendered by a profession which is practising under favourable legislative conditions. The outgoing Government has manifested a distinct interest in tropical medicine, has assisted to improve the position of the Army Medical Service, and during its long tenure of office an Amendment to the Vaccination Acts and an Act for the Registration of Midwives have been passed. A Lunacy Acts Amendment Bill was introduced which Sir John Batty Tuke blocked as quite insufficient to meet the general requirements of lunacy reform. The same Member also blocked an Accidents in Mines and Factories Bill, the provisions of which placed the medical man in a completely wrong professional position. Further legislation with regard to vaccination was promised but the promise was not kept. This is not a great record and it does not pretend to be an exhaustive account of everything that has become law in the last decade and that has also a medical bearing. But it seems to us that, despite the matters of enormous importance which it has fallen to the lot of Mr. Balfour's Government to deal with, time might have been found for more attention to the many subjects that fall under the title of medical reform. We wonder if the Government which succeeds Mr. Balfour's will be able to assist medical legislation more efficiently. The administration of the Poor-law in Ireland and Scotland awaits amendment. Medical witnesses should be properly paid. A measure dealing with revaccination has been promised. A certain security of tenure should be given to medical officers of health and the licence enjoyed by quacks should be curtailed. Medical men will certainly expect from the new Government practical sympathy with these reforms.

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH.

FEW will deny that the careful and judicious administration of the Public Health Acts is of the highest importance. The mere passing into law of legislative enactments is of itself futile if their provisions are not enforced by those upon whom this duty falls. In many parts of England and Wales, especially in large centres of population where public opinion is of itself sufficient to secure compliance with the law, there is probably little to complain of, but in many of the rural and smaller urban districts the local sanitary authorities appear very reluctant to carry out any sanitary reforms or to fulfil the obligations cast upon them by the legislature. That this reluctance is fostered—if, indeed, it is not altogether made possible—by the conditions of appointment of medical officers of health in the provinces there can be little doubt. Most of these officials are elected for short terms varying from one to five years and they have no redress if through their advocacy of unpopular but very necessary reforms they fail to secure re-election at the end of their term of office. It has long been felt by those who have the interests of the public health at heart that the remedy for this very deplorable condition is to be found in the abolition of the periodical re-election of public health officers and by making their dismissal consequent only upon the sanction of the Local Government Board. A Bill having for its object the giving effect to this proposal was introduced into Parliament last session through the instrumentality of the British Medical Association and on Thursday in last week a deputation consisting of members of the Association, of the Incorporated Society of Medical Officers of Health, and of the Sanitary Inspectors' Association met the President of the Local Government Board in order to discuss with him the provisions of the Bill which it is proposed to bring before Parliament next session either in its present form or with suitable amendments. The Bill has

been generally approved by the General Medical Council, as will be seen by our report of the proceedings of the Council. Sir John Batty Tuke, M.P., who introduced the deputation to the President of the Local Government Board, dwelt upon the public benefits which would arise from giving greater security of office to sanitary officers and each subsequent speaker in turn emphasised this aspect of the question. Mr. Gerald Balfour, while admitting that the tendency of the Bill was in the right direction, said that there were objections to giving permanency of tenure to all medical officers of health, whether appointed before or after the commencement of the Act, supposing that the Bill were carried. We hope that one result of the conference will be to convince the permanent officials of the Local Government Board of the necessity for putting an end to the intolerable position in which many medical officers of health are placed—a position which, if it is allowed to continue, can only bring discredit upon the whole public health service and must serve to retard sanitary progress, not only in the particular districts concerned, but in the whole country. The object of the Board is to obtain for the sanitary authorities the best possible service in the persons of the most competent officials, not only for the present time but for the future, and the difficulties attendant upon the realisation of this object are admittedly great. They cannot, however, be insurmountable and the best solution of the problem is probably to be found in the presentation to Parliament of a Government measure, prepared in consultation with the principal sanitary officials concerned, for it is quite evident that these latter fully realise the difficulties of the Board. Whether the initiative comes from the Local Government Board or from the British Medical Association the question is one which ought to be considered and settled by the next Parliament.

NOVEMBER AT HOME AND ABROAD.

THE appended table has been compiled from the daily reports issued by the British and some foreign meteorological departments and shows the chief statistics for the temperature and rainfall at several English and foreign resorts for the past month of November. The late autumn is generally a rainy period in many parts of the south of Europe, but it is not often that November is so exceptionally wet and unsettled over the north of Italy and the south of France as it was this year. The figures prove that over the northern half of Italy and at Biarritz only eight or nine days passed without giving at least 0·04 inch of rain and that the aggregate fall for the month was quite abnormal. The 10·69 inches at Florence were more than three times greater than the fall in London and nearly twice as great as at the most rainy spots of our south-west coasts. Biarritz had more than twice as much rain as most parts of this country and nine more days with rain than our English midlands. Towards the south of Italy the weather was not particularly wet, the rain measurements being less than during November, 1904, as well as less than in this country. Throughout the whole of the Italian peninsula the temperature was much higher than during the corresponding month of last year, while at Nice, Algiers, and Lisbon it was rather lower. At Palermo and Algiers the average warmth was nearly equal to that of July in the south of England and at Naples it was equivalent to that usually experienced with us during June. Nice, however, was not a great deal warmer than the Scilly and Channel Islands; the nights, in fact, were appreciably cooler, the extra average heat of 1·5° being entirely due to the greater warmth of the afternoons. None of the foreign resorts except Nice and Palermo had a large range between the day and night temperature but none of them was so equable as were our own isolated stations at Scilly and Jersey. The average diurnal range of 16° at Palermo was the result of some disagreeably hot days brought by the sirocco soon after the middle of the month. At Paris the weather was both colder and wetter than in London. In almost every part of the United Kingdom there was an excess of rain but except in one or two localities there was also an excess of sunshine. The sunniest spots in these islands were Torquay (the figures for which have not been compiled in time for this week's issue of THE LANCET) and Scilly, where the number of hours of sunshine was 105 and 109 respectively. In London (at Westminster) there were only 30 hours and at Nottingham 41 hours.

November at Home and Abroad.

Stations.	Highest temperature in month.	Lowest temperature in month.	Average maximum temperature.	Average minimum temperature.	Average range of temperature.	Average temperature of month.	Days with rain.	Total fall * (inches)
Nice	64	34	56	41	15	48 5	16	5·65
Biarritz	64	36	56	44	12	50·0	21	7·90
Florence	69	35	56	45	11	50 5	22	10·69
Rome	71	38	61	51	10	56 0	21	8·67
Naples	73	46	63	53	10	58 0	16	2·23
Palermo	81	43	69	53	16	61·0	10	2 33
Algiers	82	50	69	56	13	62·5	12	3·22
Lisbon	64	43	58	49	9	53 5	15	3·60
Paris	59	24	47	35	12	41·0	13	3·56
London	56	25	48	37	11	42·5	14	3·01
Scilly Isles	56	37	51	43	8	47 0	22	5·07
Jersey	57	34	51	43	8	47 0	23	6·26
Torquay	—	—	—	—	—	—	—	4·29
Bath	55	25	48	33	15	40 5	12	3·26
Nottingham ...	54	23	46	34	12	40·0	12	2·48

* Days on which at least 0·04 inch fell.

GIEMSA'S STAIN.

IN recent years the technique of staining blood films has reached a high state of perfection, the foundations of which we owe to Ehrlich. The use of a combination of methylene blue and eosin as a stain has been the subject of a great deal of laborious work. 14 years ago Romanowsky found that under certain conditions, difficult to determine, the chromatin of the malaria parasite assumed a red violet colour. He came to the conclusion that the stain was probably due to a neutral body formed by the action of the eosin (acid) on the methylene blue (base). Ziemann, who made an extremely careful study of the subject, found that only certain commercial methylene blues give the characteristic chromatin stain when brought into contact with eosin. The most constant result was obtained with pure methylene blue prepared by Meister, Lucius, and Brüning at their factory at Höchst and usually described as "methylene blue puriss. Höchst." Ziemann also came to the conclusion that the chromatin stain was the work of a neutral substance produced by the action of the eosin on the blue and he worked out a technique which was extremely complicated but which gave excellent results. For the last seven years a great many attempts have been made to simplify Ziemann's technique and remarkable results have been achieved. In the first place Nocht found that the Romanowsky red chromatin stain depends on a substance which can be prepared from the methylene blue by treatment with alkalies. He called it "red from methylene blue" and shortly afterwards L. Michaelis showed that this red substance is methylene azur—an oxidation product of methylene blue in which the sulphur atom is replaced by an SO_2 group. Thus methylene blue is

$C_{16}H_{18}N_4SCl$ and methylene azur $C_{16}H_{18}N_3SO_2Cl$. In its solutions the methylene azur is blue like methylene blue but there is a great difference in so far that the azur base is red and is easily set free by alkalies, whereas the methylene blue base is set free only with difficulty. For the preparation of azur Michaelis boiled 200 cubic centimetres of a 1 per cent. methylene blue solution (meth. blue puriss. Höchst) with ten cubic centimetres of $\frac{N}{10}$ NaHO, neutralising after cooling with ten cubic centimetres of $\frac{N}{10}H_2SO_4$. Giemsa also elaborated a method whereby it is possible to produce a pure methylene azur chlorhydrate and he found it was an advantage to use this mixed with pure methylene blue, the mixture being spoken of as azur II., in contradistinction to the pure methylene azur chlorhydrate which is named azur I. At first he used mixtures of azur II. and eosin but latterly he has attempted to simplify the method by combining these in one solution dissolved in pure methylic alcohol and glycerine. The solution of the eosinate of methylene blue or azur blue in pure methylic alcohol has already been extensively used in the stains of Jenner, Leishman, J. H. Wright, and so on. Instead of using methylene blue containing methylene azur both mixed with eosin Giemsa used the pure products combined with eosin—viz., azur eosin and methylene blue eosin, the mixture being described as azur II. eosin. Up to the present a great difficulty has existed with neutral dyes in so far that they very readily fall out of their solutions and give rise to deposits in the films which are very difficult to get rid of. Giemsa used glycerine, as Ehrlich had done years before, and found that solution took place well, but as soon as the stain came in contact with water it was almost completely precipitated. This was ultimately overcome by dissolving the azur II. eosin in the presence of excess of the basic body azur II. This is the basis of Giemsa's stain which is being extensively used at the present time for the demonstration of spirochæte pallida. The stain is made thus: azur II. eosin, 3·0 grammes; azur II., 0·8 gramme. These are thoroughly dried over sulphuric acid in an exsiccator and then finely powdered. The mixture is then dissolved in glycerine 250 grammes (Merck, chemically pure) and methyl alcohol 250 grammes (Kahlbaum I). The solution is made at 60° C. and after the mixture has stood 24 hours it is filtered. In practice the stain is used when diluted with water (1 drop to 1 cubic centimetre of water). The film is best fixed in pure methylic alcohol and staining takes place in from 10 to 15 minutes. The film is then washed in water and mounted in the usual way. Giemsa's stain can also be obtained from Grübler's Laboratory in Leipsic under the name "Giemsa's Lösung für die Romanowsky Färbung."

ARE EFFLUVIA PARTICULATE?

Is the sense of smell excited by gases or by particles is a question which Dr. John Aitken, LL.D., F.R.S., the discoverer of the fact that dust particles in the air are responsible for the formation of fog, has recently studied with very interesting results. In the case, at any rate, of all the odorous substances with which he has so far experimented the answer is decidedly in favour of the gaseous theory. The first substance under investigation was musk, of which it is possible to detect by smell, according to Berthelot, 0·000,000,000,000,000,01 gramme. It would follow that the sense of smell is a refinement exceeding the delicacy of spectroscopic methods, though it is probable that radioactivity may prove to be a still more delicate method of detection. In his experiments Dr. Aitken relied upon "the cloudy condensation test," in which, if odours are due to particles, these particles become nuclei of cloudy condensation in supersaturated air and thus make their presence visible. Careful tests made in the way indicated and excluding adventitious substances gave no nuclei from the musk, showing that the musk does not give off solid particles but evaporates as a gas or vapour and that it is gaseous particles from the musk that act on the sense of smell. Of 23 other odorous substances not one gave its perfume in solid particles, nothing but gases or vapours escaping from them. The substances tested were as follows: asafœtida, caraway, cinnamon, cloves, cubebs, lavender, nutmeg, pimento, tobacco, sewage, stink wood (Kaizer Busuk), ammonium carbonate, menthol, zinc valerianate, brass, copper, iron, lilies, roses, sweet-peas, peppermint, rue, and sage. The fact that sewage does not communicate to the air any solid particles but that the offensive emanation is a gas is of great interest in connexion with the influence of sewage smells on health. Dr. Aitken points out also that our nostrils seem to confirm the conclusion that the perfume given off by substances is not in the same form and probably often not of the same composition as the matter from which it is emitted. The perfume of snuff, for example, "is a soft velvety sensation, whilst the effect of the solid is sharp and biting, more allied to pain than pleasure." Musk, again, when "snuffed" has hardly any effect, only the musky odour is observed when no musk dust touches the nostrils. These observations are very interesting and as bearing upon them it would be equally interesting to know why it is that certain odours are more strongly perceived in pure fresh air than in stagnant air. Tobacco smoke in a keen north-easterly air is far more fragrant than in a close, stuffy apartment, and ozone appears to have the same effect as the keen air.

THE MILK SUPPLIED TO THE CITY OF LONDON.

THE medical officer of health of the City of London, Dr. W. Collingridge, gives the results of a further series of investigations in a recently issued report on the quality of the milk supplied to the City of London from a bacteriological point of view. In his last annual report it was shown that of 39 samples which were submitted to examination and which represented the supply to the city from 22 counties 48·7 per cent. proved to be clean and pure, 7·9 per cent. to be infected with bacillus tuberculosis, 17·9 per cent. with staphylococcus pyogenes aureus, and 25·5 per cent. with bacillus enteritidis (Gaertner). These results were regarded as so serious that it was decided very properly to continue the investigation, and in the present report Dr. Collingridge writes: "These results are sufficiently striking and clearly point to the grossest carelessness, amounting, in fact, to criminal negligence, in dealing with so important an article of food. One-third of the samples were unfit for use, while 9 per cent. were infected with the tubercle bacillus." Dr. Collingridge has already called attention in his previous reports to this extremely unsatisfactory state of the milk trade, there being practically no guarantee whatever, as he says, that milk is free from infection or even that it is reasonably clean. We agree very strongly with his suggestion that the attention of the Local Government Board and of the Board of Agriculture and Fisheries should be called to this matter in view of its vital importance to the health of the country. Pressure should be brought to bear upon the local authorities to enforce the Dairies and Cowsheds regulations. In the meantime he draws attention to the desirability in the interests of public health of publishing the name of the dairyman in any case where full information is not given as to the source of any contaminated supply; where immediate investigation is not made as to the sanitary condition of the farm and the health of the

cows; and where steps are not taken to discontinue the supply until any insanitary conditions are removed. Otherwise the consumers may be unaware of the conditions under which the milk is produced and therefore unable to protect themselves against a danger to health. This, in our opinion, would be an eminently satisfactory method of checking an undoubted, but in many cases unsuspected, source of evil.

A CONFERENCE ON SMOKE ABATEMENT.

A CONFERENCE on smoke abatement, arranged by the Royal Sanitary Institute in conjunction with the Coal Smoke Abatement Society, will be held in the Royal Horticultural Society's Hall, Vincent-square, Westminster, from Dec. 12th to 15th. In connexion with the conference there will be also an exhibition of smoke abatement appliances, comprising solid fuels, liquid fuels, gas, electricity, testing apparatus, destructors, and refuse consumers. A number of papers promising to be of a very interesting character will be read by well-known authorities on the subject. We understand that the list of local authorities who have announced their intention of sending delegates to the conference is already a long one. It is very gratifying to know that at length an eminently practical step is being taken to discuss thoroughly the aspects of this problem of smoke abatement with the view of ameliorating an undoubted nuisance. The movement, we are sure, will have the support and interest of everyone who desires to see a cleaner and a brighter atmosphere in London and other cities, especially during the short and dark days of winter. Meanwhile, we may refer to the admirably arranged and thoroughly practical series of tests of domestic fire grates which are being made under the superintendence of Dr. H. A. des Vœux at the new Government offices in Whitehall. A number of rooms have been placed at Dr. des Vœux's disposal for this purpose and a score or so of domestic fire grates are being tested as to their heating effects, economy, and efficiency as regards combustion. A number of observing stations have been placed on the roof of the immense building from which the volume and character of the smoke issuing from the experimental chimneys can be noted, the results being recorded on a scale specially prepared for the purpose. The observers change their station with each daily trial. A word of congratulation is due to those who have organised the trials on such excellent practical lines and who have taken advantage of the admirable opportunity which the construction of a great Government building nearing completion has offered.

AMBLYOPIA DUE TO THE FUMES OF WOOD ALCOHOL.

A SHORT time ago our New York correspondent drew attention to the large number of deaths and cases of blindness due to the ingestion of wood or methyl alcohol which had occurred during the past seven or eight years in the United States.[1] Before that time wood alcohol and methylated spirits were so offensive that no one would drink them. Then a cheap deodorised methyl alcohol known as "Columbian spirits" was placed on the market with deplorable results. It is not generally known that even the fumes of wood alcohol are dangerous to health and to eyesight. In the *Boston Medical and Surgical Journal* of Nov. 9th Dr. A. T. Hawes has reported the following case. A painter, aged 53 years, worked for three days at removing the paint from old furniture and in applying shellac to the floors of three rooms. He was a strong man of sober habits though he smoked a good deal. His sight was good. He poured the alcohol on the furniture and then rubbed the latter with a cloth. None of the rooms in which he was working was larger than 10 feet by 12 feet. As a breeze was blowing through the house he closed the doors and windows to prevent evaporation of the alcohol. On the first day of his work he began to suffer from headache, nausea, a feeling of faintness, and smarting of the eyes, but on going into the open air he was relieved and returned to work. On the second day he was in a closed room all day and suffered from the same symptoms. On walking home at night he noticed a blur before his eyes, as if a veil was hanging in front of them. On the third day he began to work but soon had to stop. The blur before the eyes increased and headache, nausea, and faintness were intense. His mind was confused and he had no clear memory of what occurred. On the fourth day, when he was seen by Dr. Hawes, he was semi-conscious and his speech was unintelligible. The temperature was 100° F. and the pupils were widely dilated and irresponsive to light. After some hours he recovered consciousness but his memory was impaired for the events of the preceding night. He complained of headache and loss of vision. He could count the persons in the room and see a hand passed before his face. There were some blurring of the right optic disc and contraction of the arteries in the left fundus. For five days the temperature ranged between 100° in the morning and 102° or 103° at night. Then the symptoms, except the blindness, disappeared. A fortnight after he came under observation vision was completely lost and the pupils were widely dilated and irresponsive to light. The American Painters' Union has recently passed a resolution that members should refuse to use wood alcohol in their work and that legislation on the subject should be demanded. At the meeting of the American Medical Association in 1904 the late Dr. Frank Buller of Montreal and Dr. Casey Wood of Chicago presented to the section of ophthalmology an exhaustive paper on all the recorded cases of blindness due to wood alcohol. They thought that its external use in liniments, cosmetics, and hair washes was dangerous to sight. In this country methylated spirit is extensively used in making liniments. The question arises whether the amount of methyl alcohol present is sufficient to render the use of these liniments dangerous to vision in any circumstances. We know of no evidence on the point but the question certainly deserves investigation.

[1] THE LANCET, Oct. 29th, 1904, p. 1256.

WHAT IS WHISKY?

AFTER an adjournment for a fortnight the proceedings in the whisky case were resumed at the North London police court on Monday, when the evidence given represented again the opinion of distillers. Mr. John Mooney said that he would not call a mixture of pot-still and patent spirit a blend; a blend was understood in the trade as a mixture of two pot-still whiskies of different ages or from different distilleries. A mixture of pot-still and patent spirit, in his opinion, was a compound and not whisky. He further said that a man will get drunk much more quickly by drinking patent still spirit than by drinking pot-still spirit. Mr. Alfred Gilbey, representing Messrs. W. and A. Gilbey, Limited, said that his firm distilled Scotch whisky from malted barley grown in the district and considered Scotch whisky to be spirit distilled from malted barley in a pot-still and Irish whisky as a spirit distilled principally from malt with a certain amount of unmalted grain used not to cheapen but to add to the Irish character. Recently his firm had put on the market a mixture of pot-still and patent spirit, the former decidedly in excess of the latter, but it was a never-neglected principle in their business to declare upon the label the nature of the contents of the bottle. Their object was to give the public every information as to what they were buying and this they did by means of the label. The hearing was again adjourned, and

adjournments are likely to be the rule for some time to come, seeing that the expert evidence is not yet reached. It should be added that the question for the magistrate to decide is in reality not "What is whisky?" but "What is Scotch and what is Irish whisky?"

EPSOM COLLEGE.

LAST week we drew attention to an appeal from Sir Constantine Holman, the treasurer of Epsom College, who is endeavouring to raise a sum of £2000 by the first week in January to meet the final payment due to the contractors for the extensive drainage works at the College, the total of which has exceeded £6000. His appeal has touched the heart-strings of a friend of the institution who has offered, as will be seen from the treasurer's letter on p. 1727, the sum of £200 provided that nine other persons will contribute a similar amount. With the numerous appeals which are being generously responded to the present is not so opportune a time as could be desired to find nine persons able and willing to give the large sum of £200; nevertheless we earnestly hope that this appeal may be successful, especially seeing that, as we pointed out last week, the need is exceptional and one for which the present governing body cannot in the least be blamed, since the cause of the recent breakdown is practically the general laxity which existed 40 or 50 years ago in the laying and re-laying of drains. Now the College is probably one of the best drained in the south of England and if the foundation attached to it can be freed from this present trouble it will continue to provide a sound education, with board and clothing, for 50 foundation scholars free of charge, and to give pensions of £30 a year to 50 aged medical men or to the widows of those deceased.

THE FIFTEENTH INTERNATIONAL CONGRESS OF MEDICINE, LISBON, 1906.

A MEETING of the national committee for Great Britain and Ireland of the Fifteenth International Congress of Medicine was held in the rooms of the Medical Society of London on Nov. 30th. Dr. F. W. Pavy was in the chair and amongst those present were Sir Dyce Duckworth, Dr. David Ferrier, Dr. H. Radcliffe Crocker, Dr. J. F. Gordon Dill, Dr. W. Frew, Dr. Boyd B. Joll, Mr. W. H. H. Jessop, Mr. L. E. Creasy, and the honorary secretaries, Dr. Clive Riviere and Mr. D'Arcy Power. The honorary secretaries made a report on the travelling facilities offered to members going to the Lisbon Congress which is to be held in Easter week 1906. They announced that the arrangements with the railway companies are as yet incomplete. A substantial reduction in the fares is promised but it will be necessary to go through the same troublesome formalities that were enforced at the Madrid Congress before the reduction can be obtained. Arrangements have been made with the Orient-Pacific Line to send the *Ophir*, which will leave Tilbury at 2 P.M. on Thursday, April 12th, and will arrive at Tilbury again at 8 A.M. on Sunday, April 29th. She will lie at Lisbon for six days to allow her passengers to make the ship their home during the Congress. During the stay of the *Ophir* at Lisbon a series of excursions will be made to suit those passengers whose time is not fully occupied at the Congress. The fare for the 17 days' cruise is 15 guineas and upwards according to the position which the cabin occupies, exclusive of the shore excursions. Early application for berths is desirable as a considerable number of the cabins are already engaged. Application should be made to Messrs. Thomas Cook and Son, Ludgate-circus, London, E.C., or to Messrs Anderson, Anderson, and Co., the Orient-Pacific Line, Fenchurch-avenue, London, E.C. A few berths are being reserved for delegates of the various scientific societies who are duly accredited to the Lisbon Congress. The Travel Bureau of 29, Cockspur-street, Charing Cross, London, S.W., has arranged two tours in connexion with the International Congress of Medicine at Lisbon. The first will be under the guidance of Mr. J. B. Banks, F.R.G.S. This party will leave Charing Cross on Sunday, April 15th, 1906, will sleep at Paris, and will arrive at Lisbon at midnight on Tuesday, April 17th. The return journey will commence on Friday, April 27th, and will end in London on Wednesday, May 2nd. The inclusive first-class fare, with excursions to Cintra and Mont' Estoril and two days at Bussaco, is 32 guineas. This includes the train *de luxe* from Paris to Lisbon but passengers who wish to use the Sud express on the way home must book their own seats and pay the excess fare. The Travel Bureau has also arranged for the conveyance of passengers by the Royal Mail Steamer *Ambrose*, a vessel of 4130 tons register in the South American service. Passengers can join the *Ambrose* at Liverpool or at Havre. The fare, first-class throughout, is 11 guineas from Liverpool back to Liverpool, or 12 guineas from London to London. Berths on the homeward voyage cannot be selected before leaving England, but a list is kept showing the order in which passengers are booked and berths will be allotted on the returning steamer in accordance with this list. The national committee at this meeting nominated a physician, a surgeon, and a general medical practitioner to serve as présidents d'honneur at the Lisbon Congress and considered a letter from Dr. F. G. Bushnell in regard to the formation of an International Health Ministry.

"TRADE IMPRESSIONS."

IN an instructive "Note on the Persistence of Trade Impressions," originally published in the *Anatomischer Anzeiger*, Professor R. J. Anderson of Galway shows that some light may be thrown on the vexed question of the transmission of acquired characteristics by examining the soft parts and skeleton of those who practise handicrafts and of their descendants. Shoemakers, for instance, tend for obvious reasons to become depressed as to the sternum. But, argues Professor Anderson, "the skeletal characters do not end when the race ends, not necessarily at least," so that the children of shoemakers who have never yet practised the paternal trade may also possess the modified or depressed sternum. He adduces no instances of this, but referring to the fact "that scarcely a trace of hair is to be seen on the legs of many old tailors," declares that "one can examine families which have ceased to follow the hereditary craft" and yet have "the characteristically smooth skin surfaces," and this "without being in any way influenced by imitation or external impressures." Further, it has been observed in the case of jockeys that the inner sides of their legs are hairless but this peculiarity is hard to trace "beyond the professional family." Professor Anderson has doubtless examined the members of hereditary trade families, such as may be found in primitive countrysides, as, for instance, in and around Galway. The investigation might profitably be extended to the trade castes of India, while folk-lore and popular tradition might throw much light on the subject.

PNEUMOCOCCIC SEPTICÆMIA.

THE conception of a general infection of the system by the pneumococcus—pneumococcic septicæmia—is comparatively recent. In the *American Journal of the Medical Sciences* for November Dr. John S. Thacher has reported a remarkable case which shows the terrible ravages which may be wrought throughout the system by the pneumococcus in a comparatively short time. A man, aged 45 years, addicted to alcohol, had pneumonia of the right lower lobe.

On the sixth day he was admitted into hospital. The urine contained albumin and hyaline and granular casts. During the next four days there were cyanosis and delirium and the temperature ranged up to 104° F. On the ninth day the patient began to improve and on the tenth he became rational and the temperature fell to 101·5°. But on the fourteenth signs of fluid in the right pleura appeared and the temperature began to rise. On the seventeenth day paracentesis was performed and yielded 300 cubic centimetres of turbid greenish-yellow fluid which contained the pneumococcus in pure culture. Two days later a diastolic murmur was heard at the cardiac apex. Up to that time the heart sounds had been clear. The pulse became more rapid and on the following day was 114 and collapsing, with a marked thrill. A double murmur was heard at the cardiac base. With the first evidence of endocarditis appeared symptoms of meningitis—headache and congestion of the left conjunctiva. On the following day the patient was semi-comatose and the neck was rigid. On the next day Kernig's sign was present. Lumbar puncture yielded three ounces of purulent fluid containing an abundance of pneumococci. Death took place on this day. Bouillon inoculated with the patient's blood on the day before death yielded a characteristic growth of pneumococci. The necropsy showed resolving pneumonia, empyema, exuberant vegetative and ulcerative endocarditis, and intense meningitis. There was some greyish mottling of the cardiac muscle. On one of the cusps of the aortic valve was a large soft, rounded vegetation, half an inch in diameter, with a rough surface and small perforation through its centre. Near this was a perforation through the cusp. The under surface of the adjacent cusp was a little roughened. The heart weighed 13½ ounces. The left lung showed considerable œdema. The right pleura, both visceral and parietal, over the entire posterior surface of the lung was covered with a layer of shaggy fibrin. The lung was œdematous and congested in the upper lobe and dark-red, mottled, and rather granular in the lower lobe. The left kidney contained a white infarct. The brain was covered with abundant exudation. There were numerous petechial hæmorrhages in the walls of the fourth and lateral ventricles and a few drops of pus in the latter. Blood taken from the left ventricle of the heart yielded a growth of pneumococci.

THE ALLEGED POLLUTION OF FIGS.

A STATEMENT appeared in a letter in the *Times* a few months ago to the effect that sea water obviously polluted with sewage was used in the packing of figs at Smyrna. According to the results of some bacteriological inquiries made at the instance of the public health committee of the Paddington borough council this would appear to be a fiction in regard to at any rate a number of samples of figs which were purchased in the open market and which were chosen as being "representative of different grades of trade." The report of the Lister Institute of Preventive Medicine states that "no bacillus coli or any similar organisms were found in as much as ten grammes of figs. There is, therefore, no evidence of the least contamination with sewage." Apart from the charge of pollution brought against the fig packers in Smyrna, it is certainly remarkable that figs should show such a clean bill of health as regards bacteriological flora, for, as is well known, most foodstuffs are certainly not sterile and often contain swarms of bacteria though the bulk of them may be innocent. Assuming that the figs examined in this particular inquiry had been at some time or other exposed to the kind of contamination indicated it would appear to follow that figs exert a germicidal action on their own bacterial contents. It may be that the juice or the concentrated sugar serves as an antiseptic. But is not the assumption somewhat hard to accept? This remarkable result, at any rate, points to a possibility of the fig enjoying an immunity from bacteria and hence as being unlikely to harbour disease entities within its substance. If this be true, what a pity that the same cannot be said of the oyster. The word "fig" or "figs" is often used in a contemptuous sense, as in the expression, "I wouldn't give a fig for this or that." This form of expression dates from classical times but in the light of bacteriological inquiry this belittling of the value of the fig is apparently undeserved. We should feel more certain on this point, however, if for the purposes of this bacteriological inquiry figs had been examined which it was positively known had been in contact with sewage-polluted water.

THE QUESTION OF AN OPEN-AIR SANATORIUM FOR BLACKBURN.

A SPECIAL meeting of the health subcommittee of Blackburn was held on April 19th when it was decided "that the question of the provision of a sanatorium for consumptive patients be deferred until more satisfactory information regarding the success of these institutions could be obtained by the medical officer of health." That official, Dr. Alfred Greenwood, has now presented his report, which is divided into four sections—namely, Preliminary Remarks, Action taken by other County Boroughs, Statistics and Opinions relating to Open-air Sanatoriums, and, finally, Conclusions. Information was received from 28 county boroughs and in the third section of the report statistics from sanatoriums both in this country and abroad are given. The opinions both for and against the treatment of various medical men are then set out. Dr. Greenwood's conclusion is that he cannot advise his health authority to erect a sanatorium for Blackburn but he advocates the voluntary notification of pulmonary tuberculosis and the continuance of strict attention to sanitation in houses, factories, and workshops.

THE LIMITATIONS OF CHLORIDE OF ZINC AS A DEODORANT, ANTISEPTIC, AND GERMICIDE.

CHLORIDE of zinc has enjoyed a reputation as a deodorant and disinfectant for over 50 years. The literature covering the experimental work that has been done with this compound for the purpose of ascertaining its antiseptic and germicidal properties is meagre and the results published by different investigators are neither satisfactory nor unanimous. The subject has recently been investigated by Mr. T. B. McClintic, a surgeon in the Hygienic Laboratory of the United States.[1] The investigation proves that the antiseptic and disinfectant properties of zinc chloride for which so much has been claimed have been overrated. The rôle of zinc chloride is that of a deodorant; for the sanitarian this is the only property of any value that it possesses, though there are objections to its use even in this connexion. When zinc chloride is added to sewage in dilutions as high as 1 in 10,000 a diminution of offensive odours is appreciable but this effect is transitory. The deodorising effect becomes more marked and more permanent until the proportions of 1 in 500 to 1 in 200 are reached but the exact proportions vary with the kind and condition of the material to be acted upon. The antiseptic power of zinc chloride is feeble. A 1 in 40 preparation in nutrient bouillon is required to inhibit the growth of moulds for 14 days, while, under the same conditions, a strength of 1 in 125 is required to inhibit bacterial development for the same period. When added to ordinary sewage zinc chloride will inhibit bacterial

[1] Bulletin No. 22, Hygienic Laboratory, U.S. Public Health and Marine Hospital Service, Washington. Pp. 24.

growths in proportions varying from 1 in 500 to 1 in 200, its activity depending to a certain extent upon the quantity of nutriment present. Chloride of zinc cannot be relied upon to destroy micro-organic life, as the bacillus coli communis is not killed in a 5 per cent. solution in one hour and it requires ten minutes for a 25 per cent. solution to kill the same organism and 30 minutes in the case of staphylococcus pyogenes aureus. Spores of bacillus subtilis are not killed in a 100 per cent. solution in 30 days and the spores of bacillus anthracis are not killed in a 50 per cent. solution in 40 days. Since the antiseptic and germicidal properties of zinc chloride are feeble its chief value rests with its deodorant properties. But its high cost, together with its caustic and toxic properties, practically eliminate it from the list of useful and trustworthy disinfectants.

HYGIENE FOR TEACHERS.

THE lot of the Government elementary teacher is not happy. He is alternately the spoiled darling and the oppressed victim of "My Lords" and also the counter with which political "educationists" play their game. Apart from these functions he is vested with responsibilities which in many cases he is, owing to no fault of his own, quite unfitted to undertake, and among these is the early recognition of disease in children. The late School Board for London had a simple rule, which was this: "If a child is fit to be out of bed it is fit to attend school"; and in pursuance of this creed children with chorea, morbus cordis, who were overworked and "did sums in their sleep," or even children who were not five years old were considered fit for school. The authorities are becoming wiser now and teachers are presumed to be able to recognise when a child is sickening for some febrile disease or is suffering from defective sight or defective hearing. Manchester being a practical, hard-headed place has, through the medical officer to the education committee, issued a little hand-book of "Notes on Hygiene for Teachers." In these notes simple instructions are given as to the importance of ventilation and as to how to recognise or at least to suspect the presence of the chief infectious diseases. Useful notes are also given upon hearing and vision and upon the lighting and heating of class-rooms. A teacher who masters the contents of this pamphlet should be able with a fair amount of certainty to exclude any child whose presence may be a source of danger to others and Dr. A. Brown Ritchie, the medical officer, deserves great credit for the plain and simple way in which he has set out his directions. A card, apparently for testing the size of type used in school books, accompanies the pamphlet. In the middle of it is cut a hole of one square centimetre with two sides marked off into millimetres. On the card are printed the following directions:—

> When the lower edge of the square is placed immediately above one line of print a satisfactory type should be so large that only two lines of print can be seen in the centimetre square—if more than two are seen the type is too small.

But this test takes no account of the "leading" of the printed matter. We are glad to see that Dr. Ritchie says in the section on the defects of vision that "pica is the smallest type which should be used in schoolrooms, and for infants that is too small."

MEDITERRANEAN FEVER.

IT will be recollected that on the initiation of the Colonial Secretary nearly two years ago steps were taken to investigate that scourge of Malta, Mediterranean fever. The Royal Society undertook the responsibility of the inquiry, the expenses being defrayed by the Government, and appointed as a commission Major W. H. Horrocks, R.A.M.C., Staff-Surgeon E. A. Shaw, R.N., and Dr. T. Zammit, Government analyst on the island. Colonel D. Bruce, R.A.M.C., chairman of the subcommittee appointed by the tropical diseases committee of the Royal Society, and Dr. R. W. Johnstone, lent by the Local Government Board for epidemiological work, joined in the investigation which has already resulted in the publication of two valuable reports, one having appeared a few months ago. In the annual report on Malta just issued reference is made to the wor of the commission and it is stated that further important discoveries have been made giving ground for hopes that the investigation "will result in the discovery of some method of satisfactorily combating a disease which has such disastrous effects upon the health of the navy, the army, and the civil community." The importance of the matter to Great Britain's chief possession in the Mediterranean is apparent from a glance at the statistics afforded by the Lieutenant-Governor from which the following summary of infectious diseases is taken:—

—	1903-04		1904-05	
	No. of cases.	No. of deaths.	No. of cases.	No. of deaths.
Total diseases	2292	324	2964	359
Mediterranean fever ...	752	72	1110	104

That is to say, remittent or Mediterranean fever was, during the past 12 months, responsible for more than a third of the total number of cases of infectious disease reported. At the same time it is pointed out that the law which provides that every physician or surgeon shall notify any case of infectious disease coming under his notice is honoured rather in the breach than in the observance, so that the above figures must be taken as approximate only. "When," adds the Lieutenant-Governor, "the law on the subject is amended it is proposed to adopt the English system of paying a fee for each case reported." It is interesting to note that no less than 556 cases of Mediterranean fever, or 50·09 per cent. of the total, occurred in the months of July, August, September, and October, 1904, an average of 134 for each of those months as against an average of 69·25 for the remaining eight months. The part played by temperature in the incidence of the disease is suggested by the fact that in July, August, and September, when the mean temperature was highest, there was a corresponding rise in the number of cases.

Mr. Henry Morris's work at the Royal College of Surgeons of England has been, and is, of great value to the medical profession, while his devotion to the Middlesex Hospital has been amply proved by his recent generous donation to the funds for the school of that institution. We understand that Mr. Morris is not in any way retiring from the practice of his profession because he is resigning his position upon the active staff of his hospital. This proceeding is apt too to be construed as professional retirement. Mr. Morris has resigned his post because he is unable to give up so much time as hitherto to hospital duties and will thus afford an earlier chance of promotion to some of his junior colleagues.

A SPECIAL general meeting of the Obstetrical Society of London was held at 20, Hanover-square, W., on Dec. 4th, to consider the report of the executive committee of the Union of Medical Societies and the modifications and amendments thereto recommended by the council of the Obstetrical Society. The report of the executive committee, together with the modifications and amendments,

on the motion of Dr. F. H. Champneys, seconded by Dr. G. E. Herman, was, after some discussion, adopted by the meeting.

As the term for which Sir William Thomson was elected upon the General Medical Council as the Direct Representative for Ireland expires on Feb. 28th, 1906, a fresh election will be necessary. The proceedings will commence early in January by the issue of the usual advertisements giving notice of the election and the President of the General Medical Council, as returning officer, has fixed Jan. 18th as the last day for the receipt of nomination papers. The result of the election will be made known on Feb. 8th.

THE death is announced of Dr. J. F. Stewart, medical officer in the Colonial Service. Dr. Stewart, who served with distinction in South Africa as a civil surgeon, met his death on Nov. 16th at the hands of some natives in a compound at Atrara in Southern Nigeria where, having lost his way, he had sought refuge.

A SPECIAL general meeting of the Dermatological Society of London will be held at the Medical Society's rooms, 11, Chandos-street, on Wednesday, Dec. 13th, at 4.45 P.M., preceding the ordinary general meeting, the purpose of the meeting being to consider the proposal for the amalgamation of the medical societies.

THE subject of Mr. H. T. Butlin's Bradshaw lecture at the Royal College of Surgeons of England is "Carcinoma is a Parasitic Disease." The word "is" was inadvertently printed "as" in our last issue.

Sir George Anderson Critchett, surgeon oculist to His Majesty the King, has been appointed a Commander of the Royal Victorian Order.

THE TUBERCULOUS CHILDREN OF THE METROPOLIS.

Sir William Broadbent delivered an interesting address on Nov. 30th before the members of the Invalid Children's Aid Association at Denison House, Vauxhall Bridge-road, London, taking as his subject the tuberculous children of the metropolis. He commenced by pointing out that while consumption had diminished year by year for the last 30 years there had been no corresponding diminution in the death-rate of the tuberculous affections especially incidental to infancy and early childhood, such for instance as meningitis, peritonitis, tabes mesenterica, diseases of the spine, bones, and joints, and scrofulous glands. On the contrary the death-rate of these tuberculous affections had distinctly increased. Sir William Broadbent discussed the suggestion that contaminated milk was the source of the tuberculosis of early life and touched lightly on the subject of the bovine tubercle bacillus differing from the human bacillus and stated that tuberculous meningitis and peritonitis were often due to cow's milk. During the years 1901–03 in London 6391 children under five years of age died from different forms of tuberculosis, of whom 2894 died before they were one year old, the mortality decreasing rapidly with every successive year of life. Tuberculous meningitis appeared to be at every age the most fatal form of the disease. On public grounds those deaths were scarcely to be regretted. If a child contracted tuberculosis at an early age it was probably susceptible or the unhealthy influences surrounding it were strong and for its own sake death was preferable to a life of suffering. In the interests of the community and of the race the elimination of a burden and source of weakness was desirable; not infrequently it gave a better chance to other children in the family and it sometimes also called attention to conditions of life which ought to be remedied. In young life little or nothing could be done for cases of true pulmonary consumption beyond sending the early cases into the country. Such cases, however, constituted a small minority of the affections of the lungs met with among London children but it was astonishing what an amount of structural damage to the lungs from other forms of disease was outlived with apparent restoration to health and vigour. A child otherwise condemned to lifelong delicacy and suffering might by change to the country or to the seaside be made permanently well and strong. If the results of thus sending them away were disappointing when the affection was actually tuberculous the method of treatment would nevertheless result in remarkable recoveries when tubercle was not present. In France more attention had been paid to the question than in England, for in that country hospital accommodation for about 500 children suffering from pulmonary tuberculosis was provided at Ormesson and Villepinte. As the result of 18 years' experience at Ormesson it was found that out of 3911 tuberculous children admitted, 983 were discharged as cured and of those many were known to have kept well and some of the boys had gone through their period of military service. In England an excellent beginning had been made in the Millfield Home, which was on the south coast near Littlehampton, for children suffering from pulmonary tuberculosis. This home was under the control of the Metropolitan Asylums Board. For early cases, where there was practically no risk of infection, the plan of boarding them out had been tried with some amount of success but there was great need of homes where these children could be received and given the benefit of open-air treatment. Sir William Broadbent at this point emphasised the fact that such homes might be of the simplest possible construction and of the least expensive material, only one room deep, open back and front, with an air space between the walls and roof, so that even when shut up for dressing or undressing the place should be really flooded with air. It was well to remember in connexion with this that children, if well fed and properly clothed, stood exposure to the coldest weather extremely well. The French believe very strongly in the treatment of children in the pre-tuberculous stage and a lesson might be taken from one of their latest developments which consisted in removing children from homes infected by tuberculous parents till more satisfactory conditions could be established. Speaking in general terms, it was admitted that tuberculosis among children was due to unwholesome housing, overcrowding, improper feeding, dirt, bad ventilation, and to the incidence of poverty generally. It was by amelioration of those surroundings that prevention of tuberculosis might be favoured and suffering might be alleviated, with in some instances the promotion of recovery, but recovery was best sought by removal from the influences which had brought on the disease. For some of those conditions public authorities were responsible, but some must be set down to the account of parents. Primarily it was the duty of municipalities to see that the housing of the poor was not incompatible with health—that is to say, that the houses themselves were not a direct cause of disease. In not one of those particulars could it be said that the housing of the poor complied with the requirements of health and decency. There were many dwellings in which water was not supplied plentifully and in which it was not protected from contamination. Often the so-called sanitary arrangements in tenements were disgusting and revolting. Houses officially condemned as unfit for human habitation had too often a very long shrift extended to them, of which full advantage was taken by the worst type of tenant. Overcrowding was one of the chief causes of tuberculosis and though there were regulations ordaining that every dwelling should provide a certain number of square feet of floor space and a certain number of cubic feet of air to each inhabitant, nevertheless, in some parishes these regulations were not enforced and one of the most flagrant violations of municipal obligation was the fact that families of children were allowed to live in basements. A terrible difficulty arose in the case of large families, for in London three children became a serious consideration, four a difficulty, and five constituted almost a disqualification for any accommodation suitable for a labourer. Cases were known of parents with five children living in one room without even a scullery, and it often happened that the basement was the only place where large families could take

refuge, and that in spite of the fact that it was illegal for children to sleep in an underground room. Concerning this deplorable condition we quote the opinion of Sir William Broadbent in his own words. He said: "The difficulty was so great, the alternative so ghastly, the fate of those multiple children so melancholy, the deterioration of the race so serious, that the most convinced believer in the injurious results of indiscriminate relief might almost relent and be tempted to ask whether there should not be some substitution of national for parental responsibility in families above a certain number where for the few years before the eldest children were free to leave school the burden of maintenance seemed almost too great to be borne. In careless or vicious families the children were perhaps better dead and it was not uncommon to find only three or four surviving out of perhaps 10 or 12." The contemplation of the causes of tuberculosis among London children was disheartening and Sir William Broadbent proceeded with evident pleasure to give a brief survey of what was being done, giving some interesting particulars concerning the Alexandra Hospital for Hip Disease, the Children's Hospital at Sevenoaks, the Hospital at Cheyne, and the Victoria Home at Margate.

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH AND SANITARY INSPECTORS.

A DEPUTATION to seek powers for the provision of greater security of tenure for medical officers of health and sanitary inspectors waited on Mr. Gerald Balfour (President of the Local Government Board) at the offices of the Local Government Board on Nov. 30th.

Sir JOHN BATTY TUKE, M.P., said he had much pleasure in introducing the deputation to Mr. Balfour and stated that their object was to bring to his notice the public benefits which would arise from greater security of tenure of office being granted to medical officers of health. The deputation comprised representatives from the British Medical Association, the Incorporated Society of Medical Officers of Health, and the Sanitary Inspectors' Association.

Dr. H. W. LANGLEY BROWNE (Chairman of Council of the British Medical Association), on behalf of the Council of the British Medical Association, spoke in support of the application that was being made by the medical officers of health.

Dr. J. A. MACDONALD said the matter was discussed last July by the representative meeting of the British Medical Association at Leicester and the medical profession were of unanimous opinion that security of tenure would conduce to extension of scientific sanitation and thus to the good of the public health.

Mr. HERBERT JONES said much hardship had resulted from the present state of things and quoted some cases showing that medical officers of health had not been re-appointed through becoming unpopular by advocating needed improvements in their distr cts.

Dr. BRUCE pointed out that security of tenure was the rule in Scotland and that it worked very well.

Sir JAMES CRICHTON-BROWNE thought the present condition of things was a menace to the public health. He said three things were needed in order that a sanitary inspector might be really helpful in maintaining the health and vigour of the people: he must have a special preliminary education and a certificate of qualification from some accredited public body; he must have security of tenure and protection against arbitrary removal or dismissal so long as he faithfully and efficiently performed his duties; and he must have, or ought to have, a modest provision made for him in old age.

Mr. W. WEST said that the Sanitary Inspectors' Association were unanimous in their desire that the alteration should be made, and they hoped that the time would come when sanitary inspectors and medical officers would feel safe in their position and would only be dismissed for proved incompetence and neglect.

Mr. GERALD BALFOUR, in replying to the deputation, said they had stated their case on behalf of the Bill with commendable clearness. He thought the question had two sides to it and until the side of the local authorities had also been heard he did not think it right that a final conclusion should be arrived at. The Bill contained two main proposals which were embodied in the first and second clauses. He did not see much to quarrel with in Clause 1, but Clause 2 provided security and permanence of tenure to medical officers of health and also inspectors of nuisances; if the Bill were carried the latter would then be called sanitary inspectors and that provision applied not merely to cases of future appointments but to every medical officer of health or sanitary inspector, whether appointed before or after the commencement of that Act notwithstanding any contract to the contrary. That provision seemed to him to be rather a sweeping one and it would probably be very difficult to induce local authorities to accept it. Nor did he think it was quite consistent with Clause 1, in which they desired to secure that the qualifications of those officers should be higher in future than they had been in the past. He trusted Clause 2 would receive consideration before the Bill was again introduced into the House of Commons. That, however, was his principal criticism against the Bill and while he was not prepared to give an absolute pledge of support to the Bill on the part of the Local Government Board he thought that the tendency of the Bill was in the right direction and he heartily sympathised with them.

Dr. C. H. WATTS PARKINSON thanked Mr. Balfour for receiving them so cordially and said he was glad to hear that they had his sympathy.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

AT the quarterly meeting of this association, held on Nov. 16th in London, Dr. T. OUTTERSON WOOD, the President, being in the chair, a vote of condolence was first passed with the friends of the late Professor Bernhard Heinrich Laehr, editor of the *Allgemeine Zeitschrift für Psychiatrie* of Berlin, who had been an honorary member since 1866 and who died a short time ago.

A paper was read by Dr. W. GILMORE ELLIS, medical superintendent under the Colonial Government of the Singapore Lunatic Asylum, upon the Opium Smoking and the Morphine Habits in the Straits Settlements. He said that he could not from his experience of over 17 years support the current statement so frequently heard in Exeter Hall that opium smoking was a very great cause of insanity in the East. He had met with a few cases only which could be attributed to the use of the drug and he ventured to assert that the hard-working honest coolie never became ill by taking his two daily doses of opium extract any more than the British workman in taking his two half-pints of ale a day. It was the abuse of opium, as of alcohol, which was an evil habit and to meet some of these abuses the Straits Settlements Legislative Assembly had recently suggested restrictive measures. Dr. Ellis referred to the infrequency of general paralysis among the native races of the Straits Settlements, although syphilis was common. He stated that it was most exceptional to meet such cases. Kraepelin, who had visited the colony not long since, found several cases of what he had so fully described as dementia præcox and he might say that such cases were far from infrequent. Dr. Ellis showed some interesting photographs and water-colour drawings of skin eruptions in patients who had been habitually injected with morphine subcutaneously and these he afterwards presented to the library of the association.—Dr. G. FIELDING BLANDFORD supported the views of Dr. Ellis as to the rarity of mental states associated with morphine and opium and he believed that there was much exaggeration as to the evil results of opium in the East generally. He would like to know the experience of Dr. Ellis as to the effects of hashish upon the native races.—Dr. J. C. BRISCOE agreed with Dr. Ellis and from his own experience agreed with the findings of the Royal Commission appointed in 1893 to inquire into the effects of opium eating and smoking on the people of India, which were that the use of opium was, as a rule, moderate and that its excessive use was very exceptional.—Dr. D. YELLOWLEES referred to the moral deterioration which accompanied the excessive use of drugs.—Dr. ROBERT JONES

referred to a list of cases he had published in which morphine was the proximate cause of insanity, and stated that the forms of insanity met with in native races were those mostly due to drugs or those which had a toxic origin; and that the highly evolved forms of insanity, such as systematised chronic delusions, were uncommon. He discussed the interesting suggestion thrown out by Dr. Ellis's paper as to the rarity of general paralysis in negroid races, although the incidence of syphilis was common.—Dr. W. L. ANDRIEZEN gave an interesting summary of the literature on the subject and showed that the inhabitants of the fenland in the Thames Valley had discovered centuries since the virtues of opium as a prophylactic against malarial fevers.—The PRESIDENT summarised the discussion and Dr. ELLIS replied.

Dr. F. G. CROOKSHANK read an interesting paper on the Study of Evolution in Relation to Psychiatry and discussed the association of mind and matter. He pointed out the different modern views of this relationship and suggested that with further knowledge some theory might be discovered which would better explain the interdependence than those hitherto advanced.—Dr. ANDRIEZEN contended that the line of progress would not in future run upon the metaphysical basis but upon purely practical and biological lines.—The PRESIDENT expressed the thanks of the association to Dr. Crookshank and hoped that members would soon have the opportunity of reading the paper in the *Journal of Mental Science*.

Dr. GEORGE WATTERS GREENE read a paper upon Prognosis in Dementia Paralytica. He had divided cases of general paralysis into groups according to the weight of the brain and also according to convolutional pattern. He had also further inserted a group according to whether the pupil was fixed or reacted to light, also according to age and the condition of stress.—Dr. YELLOWLEES spoke of the apparent change in the form of general paralysis within his own experience. As was the case in normal faculties and organisms, so also in disease there appeared to be cycles and variations. His experience pointed out that general paralysis in duration was much more protracted than was the case in his early experience.—Dr. H. F. HAYES NEWINGTON referred to the rarity of general paralysis among ladies of the higher classes and he also referred to the change in type and suggested that lesions not essential to general paralysis were now probably described as varieties of the disease.—Dr. T. B. HYSLOP referred at length to the varieties described as "pseudo-general paralysis."—Dr. W. J. MICKLE, Dr. JONES, Dr. BRISCOE, Dr. BEDFORD PIERCE, Dr. ELLIS, and others took part in, and the PRESIDENT summarised, the discussion, thanking Dr. Greene for his paper.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

THE autumn general meeting of the above association was held on Nov. 28th at the Hotel Cecil, London. The chair, in the absence of the President (Sir William Whitla), was occupied by Dr. J. H. Swanton, chairman of council. There was a very large attendance of members.

The council reported that it had under consideration the removal from the roll of members of the names of all those who were two years and upwards in arrears. The list to be published with the forthcoming annual report would therefore not contain such names unless cause for delay were shown in the meantime by defaulters. The names now on the roll number upwards of 850.

The members and their friends, to the number of 233 (including 67 ladies) subsequently dined together in the Grand Hall of the Hotel Cecil. There were but two toasts. That of "The King" was received with marked enthusiasm, Dr. Macan taking the solo in "God Save the King."

"The Prosperity of the Association" was proposed by Sir Dyce Duckworth who said that he was greatly in favour of such societies. This particular association had done good service in many ways amongst which he placed very highly the example it set in introducing ladies to their social gatherings. One of our greatest observers of character had said that the Irish were sentimental and emotional, the Scotch sentimental but not emotional, and the English neither one nor the other. A gathering such as he was joining in that evening was useful to those present who belonged to all three nationalities just as he felt when a member of the General Medical Council how much brighter was the atmosphere of the council chamber owing to the presence at the side of stolid Englishmen and more stolid Scotchmen of genial spirits like those of the late Samuel Haughton and Rawdon Macnamara. He concluded by echoing from his heart the sentiment contained in the motto of the association "Floreat Hibernia Semper."—The Chairman (Dr. P. S. ABRAHAM), in replying, said that Sir William Whitla, their President, had telegraphed to say how much he regretted that he was at the last moment detained in Belfast.

An entertainment of a very varied character followed. Ventriloquism and thought-reading, short stories by Mr. Upton, and a very clever exhibition of living marionettes were interspersed between songs, duets, &c. (sentimental and otherwise), and a performance on the violin by Miss Ernestine Mac Cormac who had a very hearty reception, owing partly to her relationship to one of the most prominent members of the association when it was first founded (nearly 30 years ago), but principally to the marvellous skill with the instrument which she seemed so thoroughly to understand. There was a unanimous expression of opinion that much praise was due to Mr. Canny Ryall, the entertainment secretary, for the great success of the evening.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Dec. 8th, 1827.

The influence of journals, and public opinion, act reciprocally upon each other; but the influence of journals, or journalism, as this power is now designated by a people who are beginning to reap its inestimable benefits, commonly gives the first impulse and direction to public opinion. While we acknowledge the powerful aid and co-operation of *The Times*, and other journals, it is a source of honest satisfaction to ourselves to reflect, that our own exertions have contributed in no slight degree, to bring the question of medical reform to a crisis. Low as the medical profession stands in the estimation of *The Times*—degraded as we are compelled to admit it to be, through the influence of a corrupt oligarchy, it was in a state of still more deplorable debasement, when THE LANCET commenced its labours. Its members were then not only degraded, but subjugated; not only oppressed, but reduced to a state of abject submission to their oppressors. Destitute of a rallying point, they were at once trampled upon, and insulted by the corruptionists, who have since characterised the state of torpor into which the profession had sunk, as a state of respectable repose—*ubi solitudinem faciunt, pacem appellant*. By establishing a free medical press, THE LANCET gave the first blow to this system of tyranny, cupidity, and corruption; we roused the profession to a sense of the injuries and indignities which have been heaped upon them, and to a spirit of resistance, which must terminate in the overthrow of an oligarchy, now as crestfallen and feeble, as it was then insolent and overbearing.

Another fact from which we augur the speedy triumph of the cause of medical reform, is the unanimity with which that reform is desired by the great body of the profession. In this respect, the task of removing medical abuses presents much less difficulty than that which reformers generally have to encounter. Parliamentary reform has never made much progress in this country, because the body sought to be reformed has never seriously desired to effect its own amelioration. It is a hard matter to deal with a patient who refuses to take the only remedy that can cure his disease, especially where, if the smallest violence be used to compel the swallowing of physic, the patient is strong enough to throw his surgeon out of window. In the case of medical reform there are no such difficulties to contend with; the public desires to see the cure effected, the surgeon is willing to administer the remedy, and the patient is both ready and anxious to take it. It is not necessary to prove directly that the great body of the medical profession are friends to reform; but we may show, *e converso*,

by taking a glance at the *tail* of the profession, that the anti-reformists are confined to that unseemly excrescence of the body medical.[1]

ASYLUM REPORTS.

Lanark District Asylum, Hartwood (Report for the year ending May, 1905).—From the report of the medical superintendent, Dr. Neil T. Kerr, it appears that during the year 212 patients were admitted, 143 were discharged, and 76 died. The average daily number resident was 897. The admissions include 37, and the numbers resident 139, out-county cases. It is considered that senile cases are often sent unnecessarily to asylums because the friends shirk the slight discomfort and anxiety which home nursing would entail. Of causes of insanity alcoholic intemperance and heredity are the principal but neither appears particularly potent if, as is stated, the former occurred in 33 of the admissions (about 15·6 per cent.) and the latter in 22 (10·4 per cent.). These are low figures, the latter extremely so, when it is remembered that many asylums record from 40 to 50 per cent. of heredity of insanity and allied neuroses. It should be defined what is meant by heredity. The recovery-rate reached the satisfactory figure of 49·2 per cent. of the admissions. Two males recovered after having been insane for more than six years; the mental symptoms in each case disappeared after a severe attack of pneumonia. It is well known that acute insanity often disappears after attacks of physical disease but the reason is obscure and this matter is well worth investigation. The death-rate amounted to 8·4 per cent. on the average number resident. Pulmonary tuberculosis and general paralysis are stated to account for the low proportion of 11 and eight respectively of the 76 deaths, but on looking up the Causes of Death Table we find that tuberculous disease was present in two more cases, making 13 in all. A sanatorium for 26 tuberculous patients is to be erected. The report of one of the Commissioners in Lunacy (two visited the asylum) states that the rate of discharge of improved patients to domestic care is very small, and active efforts in this direction are recommended. The supineness of asylum and parochial authorities in this matter is stated in the Commissioner's report to be one of the main factors in causing the increase in asylum populations. This statement agrees with the views expressed by the Scottish Commissioners in Lunacy in their last report.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 7730 births and 5005 deaths were registered during the week ending Dec. 2nd. The annual rate of mortality in these towns, which had been 15·6, 15·5, and 17·9 per 1000 in the three preceding weeks, declined again last week to 16·7 per 1000. In London the death-rate was 18·1 per 1000, while it averaged 16·1 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 5·2 in King's Norton, 6·9 in Grimsby, 8·7 in Bournemouth, 9·5 in Devonport and in Barrow-in-Furness, 9·6 in Ipswich, and 10·0 in Southampton and in Wallasey; the highest rates were 21·1 in Wigan, 21·3 in Liverpool, 21·6 in Gateshead, 21·8 in Derby, 22·5 in Wolverhampton, 22·6 in Merthyr Tydfil, 23·3 in Tynemouth, 24·1 in Bootle, and 26·6 in Rochdale. The 5005 deaths in these towns last week included 385 which were referred to the principal infectious diseases, against 371, 338, and 355 in the three preceding weeks; of these 385 deaths, 118 resulted from measles, 81 from whooping-cough, 56 from diphtheria, 55 from scarlet fever, 49 from diarrhœa, and 26 from "fever" (principally enteric), but not any from small-pox. No death from any of these diseases was registered last week in Hornsey, Brighton, Southampton, Burton-on-Trent, West Bromwich, Grimsby, Nottingham, Bury, Barrow-in-Furness, Huddersfield, Stockton-on-Tees, Tynemouth, or Newport (Mon.); the highest death-rates from the principal infectious diseases were recorded in Wolverhampton, Bootle, Rochdale, Blackburn, Preston, Rotherham, Middlesbrough, West Hartlepool, and Gateshead. The greatest proportional mortality from measles occurred in Willesden, Birmingham, Blackburn, Preston, Middlesbrough, and Swansea; from scarlet fever in Rochdale; from diphtheria in Bootle, Blackburn, and West Hartlepool; from whooping-cough in Rochdale, Burnley, and Gateshead; from "fever" in Wigan; and from diarrhœa in Salford and Rotherham. No death from small-pox was registered last week in any of the 76 towns; and no cases of this disease were under treatment during the week in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 4154, 4120, and 4127 at the end of the three preceding weeks, had declined again to 4021 at the end of last week; 375 new cases were admitted during the week, against 494, 425, and 470 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 383, 401, and 490 in the three preceding weeks, decreased again to 478 last week, and were 87 below the number in the corresponding period of last year. The causes of 51, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in London, West Ham, Leicester, Nottingham, Salford, Bradford, Leeds, Newcastle-on-Tyne, and in 43 other smaller towns; the highest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, St. Helens, Blackburn, Sunderland, South Shields, Gateshead, and Newport (Mon.).

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 17·5, 17·5, and 21·9 per 1000 in the three preceding weeks, declined again to 18·7 per 1000 during the week ending Dec. 2nd, but was 2·0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 12·8 in Paisley and 13·5 in Edinburgh to 24·5 in Greenock and 25·7 in Dundee. The 628 deaths in these towns included 33 which were referred to measles, 14 to diarrhœa, six to whooping-cough, five to diphtheria, and three to scarlet fever, but not any to small-pox or diphtheria. In all 61 deaths resulted from these principal infectious diseases last week, against 61, 64, and 84 in the three preceding weeks. These 61 deaths were equal to an annual rate of 1·8 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 28, 34, and 48 in the three preceding weeks, declined again last week to 33, of which 16 were registered in Glasgow, 11 in Dundee, four in Greenock, and two in Paisley. The deaths from diarrhœa, which had been 18, 19, and 14 in the three preceding weeks, were again 14 last week, and included five in Glasgow, four in Dundee, three in Aberdeen, and two in Edinburgh. The fatal cases of whooping-cough, which had been seven, two, and ten in the three preceding weeks, decreased again last week to six, of which three occurred in Glasgow and two in Edinburgh. The deaths from diphtheria, which had been four, four, and eight in the three preceding weeks, declined to five last week, and included four in Glasgow. The fatal cases of scarlet fever, which had been three, three, and one in the three preceding weeks, rose again last week to three, of which two occurred in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 152, 130, and 159 in the three preceding weeks, declined again last week to 148, and were 42 below the number in the corresponding period of last year. The causes of 23, or nearly 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·1, 20·8, and 22·7 per 1000 in the three preceding weeks, declined again last week to 20·4 per 1000. During the past four weeks the death-rate has averaged 21·0 per 1000, the rates during the same period being 17·9 in London and 16·0 in Edinburgh. The 148 deaths of persons belonging to Dublin registered during the week under notice were 17 below the number in the preceding week and included seven which were referred to the principal infectious diseases, against seven, five, and seven in the three preceding weeks; of these,

[1] Excerpt from leading article.

four resulted from diarrhœa, two from "fever," and one from whooping-cough, but not any from small-pox, measles, scarlet fever, or diphtheria. These seven deaths were equal to an annual rate of 1·0 per 1000, the death-rates last week from the principal infectious diseases being 1·3 in London and 0·8 in Edinburgh. The fatal cases of diarrhœa, which had been three, two, and three in the three preceding weeks, further rose last week to four. The 148 deaths in Dublin last week included 26 of children under one year of age and 44 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a considerable decline from the respective numbers in the preceding week. Two inquest cases and three deaths from violence were registered; and 46, or nearly a third, of the deaths occurred in public institutions. The causes of four, or nearly 3 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons: G. A. S. Bell to the *Monmouth* and M. J. O'Regan to the *Trafalgar*. Surgeons: G. H. S. Milln to the *Æolus*; J. Whelan to the *Orion*; and C. K. Bushe to the *Vivid*. Surgeons and Agents: B. Thornton, at Margate, and C. de L. Carey, at Guernsey.

The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's Fleet:—Malcolm Cameron, James Duff Scott Milln, Kenneth Hurlstone Jones, William James Codrington, Francis Bolster, and James Herbert Fergusson (dated Nov. 29th, 1905).

ROYAL ARMY MEDICAL CORPS.

Major A. C. Fox is detailed for duty in the Southern Command. Captain C. S. Smith has embarked for Mauritius.

ROYAL ARMY MEDICAL CORPS (MILITIA).

Lieutenant Herbert Hugh Blair Cunningham, Reserve of Officers (late Royal Irish Fusiliers), to be Lieutenant (dated Dec. 2nd, 1905).

IMPERIAL YEOMANRY.

Bedfordshire: Surgeon-Lieutenant H. Skelding to be Surgeon-Captain (dated Sept. 12th, 1905).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant-Colonel George H. Turnbull, having resigned his commission in the Volunteers, ceases to belong to the Army Medical Reserve of Officers (dated Dec. 6th, 1905).

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 7th Lancashire (The Manchester): Surgeon-Lieutenant (Honorary Captain in the Army, Honorary Major, Militia) C. J. J. Harris, from the 1st Surrey (South London) Volunteer Rifle Corps, to be Surgeon-Lieutenant (dated Dec. 2nd, 1905).

Rifle: 2nd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant-Colonel G. F. England is granted the honorary rank of Surgeon-Colonel (dated Dec. 2nd, 1905). 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Captain (Surgeon-Captain, Army Medical Reserve of Officers) Thomas Beard, from the 1st (Stirlingshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders), to be Surgeon-Captain (dated Dec. 2nd, 1905). 3rd Lanarkshire Volunteer Rifle Corps: Surgeon-Captain A. S. Tindal resigns his commission (dated Dec. 2nd, 1905). 1st London (City of London) Volunteer Rifle Corps: Surgeon-Captain H. B. T. Morgan resigns his commission (dated Nov. 20th, 1905). 1st Cadet Battalion the King's Royal Rifle Corps: Surgeon-Lieutenant St. J. F. Blake-Campbell to be Surgeon-Captain (dated Nov. 20th, 1905).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Northern Command: Manchester Companies: Captain W. M. Steinthal resigns his commission (dated Dec. 2nd, 1905).

THE WAR SECRETARYSHIP.

Just as Mr. Arnold-Forster has started his scheme of army reorganisation and is waiting to see the result of its practical working and as he has—very advisedly as most people think—yielded to the pressure of public opinion in the matter of the Volunteer forces, he has himself to give way to the appointment of his successor in office. As to his courageous earnestness, industry, and the soundness of some of his principles of army organisation there does not seem to be much doubt. On this point, however, we are happily not called upon to express any opinion. But as regards what should in future be the army medical organisation for war purposes we do not think that any really adequately comprehensive scheme has been yet put forward or possibly even realised. What is to be the fate and future army policy as a whole of this country under a new Government is naturally causing great interest and speculation. What changes, if any, will be made in regard to both naval and army medical organisation at the Admiralty and War Office respectively are matters which more directly concern the medical profession but about these, in present circumstances, it would obviously be futile to speculate.

RECRUITING FOR THE ARMY.

Mr. Arnold-Forster may be fairly congratulated on the satisfactory report on recruiting recently issued by the War Office. From Jan. 1st to Oct. 31st there had enlisted 29,929, as compared with 33,929 last year. The nine years' enlistment for the infantry of the line began, and up to Nov. 30th this year out of 24,577 men 21,498 accepted the nine years' term and 1073 for 12 years, the remainder being short service men. It is estimated that during the past few weeks the rate of enlistment has been about 20 per cent. in excess of the rate during the corresponding period of last year. The number of medical rejections during the present year seems to have been very considerable, having, it is stated, in some cases exceeded 30 per cent. of the applicants. The two systems of enlistment—namely, that for long and that for short service (to a limited extent)—are being run concurrently. Judging from the reports that have been received there is an observable improvement in the physical and social qualities of the average recruit now being taken into the army.

ELEMENTARY ARMY DRILL AND RIFLE PRACTICE.

We are glad that the system of affording an elementary military training and some knowledge of the use of the rifle to the youth of this country so strongly advocated by Lord Roberts, Lord Meath, and others seems to be making satisfactory progress. We hear, perhaps, too much in these days of the rights of individuals and too little of their duties. So far as the boys are concerned, a little military training will tend to improve their health and physique, to sharpen their intelligence, and to give them habits of obedience and self-restraint, while from a national point of view it will go towards fitting them to take part in the defence of this country whenever they may honestly feel called upon to do so.

THE ADMIRALTY AND WINE BILLS.

The Admiralty has directed in a circular letter that in future officers' wine books are to be examined by the captain as often as he thinks desirable and that no subordinate officers under the age of 20 years are to be allowed spirits. The Admiralty being of opinion that officers of any rank who habitually consume more alcohol than is good for them must of necessity suffer a loss of nerve, and consequently render themselves inefficient for service, has given orders in such cases to commanding officers to limit or to stop the wine bills of any officer should they consider this course to be in the interests of His Majesty's service.

RUSSIAN RED CROSS SOCIETY AND FAMINE DISTRICTS.

The appeal of the Red Cross Society for assistants in the famine districts of Russia has been responded to by 18 medical men and over 40 medical assistants besides numbers of unqualified people. At the present moment the remuneration established for the medical men is 200 roubles (£20) per month with free conveyance to and from the field of operations. The contingents are being made up and the most necessitous districts will be visited first.

THE EMIGRATION OF RUSSIAN MEDICAL MILITARY STUDENTS.

The students of the Military Medical Academy, in view of the interruption of the classes in the Academy and as they do not wish to lose more time, are shortly going abroad in order to continue their studies in foreign universities.

In a recent Convocation at Oxford the degree of M.A. was conferred on Lieutenant-Colonel G. S. A. Ranking (retired), I.M.S., Lecturer in Persian, by decree of the House.

Correspondence.

"Audi alteram partem."

THE PROPOSED AMALGAMATION OF THE LONDON MEDICAL SOCIETIES.

To the Editors of THE LANCET.

SIRS,—I quite agree with Mr. E. Owen that the question at the root of the amalgamation scheme is what the profession at large will gain by it. In my belief it will gain in thoroughness of work and in economy of procedure. Mr. Owen's argument implies that in his opinion the physician and surgeon and obstetrician have each a separate line of work which is more or less parcelled off from a general knowledge of medicine. I strongly deprecate this view and regard the opinion of neither physician nor surgeon as worth much if he does not keep up with the general knowledge and the progress of medicine and surgery. The wide view of medicine alluded to by Mr. Owen as the attribute of the general practitioner must also be held by the man who aspires to a consulting position in any branch of it, and the catholicity of judgment thus possessed will, I venture to think, be promoted by a closer union of societies cultivating special branches of medical science. Many years have passed since Lettsom's day but I think medicine may be severely abreast of its time and yet appreciated by the whole profession; those members in general practice not requiring, in these days, that technicalities should be smoothed down in their favour. A principal aim of a federation of the central societies would be the advance of medicine in the sections and the full consideration at a few meetings a year of such subjects as may thus have ripened for general discussion from all points of view. It is earnestly to be hoped that a large number of men engaged in general practice will become London and provincial Fellows of the whole society, to have the use of the library and the *entrée* to all the sectional meetings.

I have many times expressed the view that all the district medical societies in London should remain as they are. I am also of opinion that in the large central society when established there should be facilities for a less formal conversational consideration of cases or questions from time to time. With the large margin of resources that is now wasted it can scarcely be doubted that medical and surgical cases and papers could be more adequately illustrated, tabulated, and discussed at full and well-arranged meetings than at present. Such meetings as that on appendicitis in March and that on the tuberculin treatment of tuberculous diseases last week, held at the Royal Medical and Chirurgical Society, are equally valuable and attractive to all branches of the profession, but they are very costly and could not often occur without larger funds at disposal.

I have the honour to be, Sirs, your obedient servant,

Dec. 4th, 1905. R. DOUGLAS POWELL.

To the Editors of THE LANCET.

SIRS,—While the union of the medical societies is in suspension it may be useful to consider some of its financial aspects. I will limit myself to one only—namely, the cost of the Transactions. It is not possible from the published accounts to give this exactly. The Royal Medical and Chirurgical Society has 454 Fellows whose annual subscriptions entitle them to a copy and there are others who paid a composition fee. The whole number might be 500 and the cost of the Transactions is £518, or nearly £1 a head. The Pathological Society gives 14*s.* 9*d.*, and the Therapeutical Society nearly 6*s.* The 753 Fellows of the Medical Society pay £143 and the 600 members of the Clinical Society £165, but it does not appear how many are entitled to copies. It is proposed in the scheme that every member contributes one guinea and an additional half-guinea for each additional section to which he belongs. That is practically half-a-guinea per section and half-a-guinea as capitation subscription. My figures show that the half-guinea is not equal to the expense of the section in some cases. Moreover, the 600 (expected) Fellows of the united society will be entitled to copies of all the Transactions, so that the *annual expenses* cannot be fully provided for. What will happen to the 600 Fellows with their 16 or 17 volumes of learning yearly one can hardly venture to think. To suppose that the proceedings of so many sections can be boiled down into a single volume is to show oneself densely ignorant of the intense and varied activities at work in the profession. We are not living in the times of Mirfeld and Sir Thomas Browne. The position of country members will require consideration, and paragraph 12 of the draft scheme, relating to the management of the funds, will require modification. To be a real union a considerable amount of autonomy is advisable, although it will be a fine thing for the less popular sections to be able to rely on the financial support of the more wealthy societies.

I am, Sirs, yours faithfully,

Lexham Gardens, W., Dec. 2nd, 1905. G. CRICHTON.

THE DECLINE OF ART IN MEDICINE.

To the Editors of THE LANCET.

SIRS,—Sir Dyce Duckworth's address on the Decline of Art in Medicine, to which you have recently called attention, will, I hope, be generally and carefully considered in the profession. I have read it with the attention demanded alike by the importance of the subject and by the position and the attainments of the author, and also with the pleasure naturally arising from the grace and literary skill of the composition itself; but Sir Dyce will, I am sure, forgive me for saying that I find myself, with regard to it, very much in the position of the famous Master of Trinity who, after beginning his sermon with a quotation from St. Paul, added thereto the words "and I partly agree with him." If I may so far trespass upon your space, I should like to say how far my agreement with Sir Dyce extends, and at what point I am constrained to differ from his conclusions.

Sir Dyce explicitly denies that "the results of our present system of medical education, as witnessed in the majority of our finished pupils," are as satisfactory as were those produced by the "shorter and less scientific curriculum of a quarter of a century ago;" and declares himself to have found that "a long course of preliminary scientific study" has "but little fitted" students under his observation "to secure the full value of their work and opportunities in the wards." He contends that "while the sciences on which medicine is based have made astonishing progress in the last half century, the art of medicine itself has materially declined and fallen into neglect." He tells us that "under our present system of education an undue amount of time is occupied by the study of scientific subjects during what should be a purely medical and surgical curriculum." He says that "if pursued too far, or in wrong directions, these studies have little bearing on the student's life-work, and if it be urged that they constitute important elements for his mental training, they should be unnecessary if he has already had a good general education." In support of these views he quotes Dr. John Kent Spender of Bath, who says that the medical educator has for the most part to train "dull, plodding, conscientious men" and that no clinical or therapeutic education can be too long or too thorough, "provided that literary culture and *scientific habits of thought* are in the background." The latter part of this proviso, which I have italicised, appears to me to be a very large and comprehensive one, little likely to be fulfilled by "dull" men in general, even although they may be plodding and conscientious.

Sir Dyce illustrates the failures of medical education by referring to the many new and widely advertised drugs which "have a strange fascination," not only for students, but also "for men already in practice, who appear to credit the inflated testimony presented with them, and forthwith proceed to employ these alleged remedies." In other words, as I should be inclined to put the case, there are practitioners who have not emancipated themselves from the innocent credulity which is natural to the young, and have not sufficiently studied science to know that the foundations of knowledge must be laid in the exercise of caution. I fully agree with Sir Dyce in respect of much that he deplores, but I am compelled to differ from him on the question of causation. Looking back over more than 60 years of medical life, as student and practitioner, I agree with him that the "art" of medicine is less generally diffused throughout the profession than once it was; but my observation leads me to attribute the change to circumstances quite other than an extension of the time devoted to scientific education.

In the first place I think that the misuse of instruments of precision (their transformation, if I may say so, from

walking-sticks into crutches) has in many cases led to the acceptance of low standards of clinical proficiency in relation to the matters which such instruments are calculated to elucidate. Sir Dyce refers to the pulse; and I will take the sphygmograph as an illustration of my meaning. In my youth, we were taught to examine the pulse with extreme care and under the supervision of the teacher, to write down its characters, and to state the conclusions which we based upon them. A proper use of the sphygmograph would, I take it, be to replace the teacher's touch as a means of educating and correcting that of the student, who should now be required to work up to the more accurate standard thus furnished to him, and to predict the character of the trace by the exercise of his own trained sensibility. Too often, I fear, the trace is taken and exhibited for the instruction of the class, and they are supplied with ready-made and easily forgotten knowledge which, 50 years ago, they would have had to obtain for themselves by methods doubtless less exact, but much more likely to be productive of permanent results. A sphygmograph is not a very portable instrument, and in its absence the pulse is apt to be, to the modern practitioner, the *res fallacissima* described by Celsus. Something similar might perhaps be said of the thermometer and of other clinical instruments of precision, which might be used to train and to assist the senses, and are too often used to supersede them. I should like to see students taught to estimate probable temperature from other conditions before they were permitted to see the thermometric record and to infer the general state from its disclosures. Illustrations of a similar character will, I have no doubt, suggest themselves to many of my contemporaries.

Apart from defective development of the *tactus eruditus* and of the faculty of observation, using these expressions in the largest sense, the faults or errors pointed out by Sir Dyce are mostly due to want of scientific accuracy and of scientific caution, and these wants in the profession cannot fail to react upon the public. Is any tendency towards supplying them ordinarily traceable either to the "good general education" of Sir Dyce or to the "literary culture" of Dr. Spender? The reply is furnished by a glance at the British Parliament and at British administration. Our legislators, or at least a large majority of them, have received what Sir Dyce could not but call a "good general education," and there is not a single department of the State, unless it be the Royal Navy, in which scientific caution is practised, or in which scientific accuracy is even aimed at. A policy of compromise or of makeshift is almost universal. Our "educated" or "literary" classes are as much the natural prey of every charlatan as minnows are the natural prey of a pike. We have seen the wife of an English ambassador energetically supporting the pretensions of one of the worst of the tribe of cancer quacks. We have seen a distinguished writer of fiction perish under the foolish ministrations of so-called "Christian Science." We have seen an English Prime Minister declaring the efficacy of vaccination to be an open question; and the total want of trained judgment and of scientific knowledge implied by these events is not peculiar to England. Trousseau, lecturing on quackery in Paris, five-and-forty years ago, said, "Les empiriques, chose triste à dire, ont toujours beaucoup d'accès auprès des gens d'esprit;" and he gave several illustrations of the sort of reasoning which the public is willing to accept, illustrations one of which derives fresh interest from the fact that a "literary" man, presumably possessing what Dr. Spender means by "literary culture," is at present allowing his name to be publicly advertised in connexion with a so-called "hair restorer." "Il est certaines affections, comme la perte, la chute des cheveux, qui affligent beaucoup de gens. Il n'est pas de jour que l'on ne voie annoncés dans les journaux d'excellents remèdes pour guérir la calvitie; il n'est pas de jour que l'on n'entende dire à de très honnêtes gens: 'J'ai acheté de la pommade du lion, ou de la pommade du chameau; j'en a frotté la tête de mon fils, ou de ma fille, et il lui est repoussé une chevelure splendide.' C'est vrai; seulement pour le médecin qui sait qu'après toutes les maladies aiguës, qu'après l'accouchement, les cheveux tombent et qu'ils repoussent ordinairement plus beaux et plus touffus qu'auparavant, il n'y a rien là d'extraordinaire, mais, pour la personne étrangère à notre art, la pommade du lion ou du chameau a tout fait." The distinguished lecturer farther illustrated his position by declaring that: "A l'Académie, presque tous les mois, on envoie un spécifique pour faire repousser les cheveux. Le bureau, qui y met un peu de malice, nomme ordinairement pour commissaires les trois académiciens les plus chauves. Nous n'avons jamais vu qu'aucun d'eux, même au bout de six mois ou un an, eût un cheveu de plus; mais, par compensation, ils en avaient ordinairement quelques-uns de moins."

For my own part, Sirs, I must plead guilty to a full conviction that a longer and more complete training in physical science than has ever hitherto been afforded will be a necessary part of the medical education of the future. It will be necessary, in my humble judgment, upon two grounds, first, in order to enable students to understand the conditions of reaction between man and his environment as these are likely to be elucidated by the progress of knowledge; secondly, as a means of intellectual training, calculated, as no other pursuit can be, to teach accuracy of observation, care in discriminating between phenomena presenting points of resemblance, caution in the acceptance of conclusions, and complete reliance upon that which has once been shown to be true. It will not convert "dull and plodding" men into great geniuses, of whom only two or three in a generation are furnished by the bounty of Nature; but it will incline the average student towards those "scientific habits of thought" which Dr. Spender desires to see established and will afford at least some protection against the daily errors which are consequent upon imperfect knowledge and upon over hasty judgment. It will not permit the ascription to the *pommade du lion* of phenomena the true causes of which must be sought elsewhere.

With reference to the major portion of Sir Dyce Duckworth's only too well-founded complaints, I would suggest that greater care should be taken with what I would describe as the elements or rudiments of clinical instruction, and that there should be less haste in endeavouring to carry the student beyond these elements into the higher regions of diagnosis and of treatment. For such a reform a longer period of study than is now required would no doubt be necessary, but the results ought to be of more than equivalent value. We are apt to forget that the total duration of the medical curriculum was greatly shortened by the abolition of apprenticeship and that it has not been restored to its original length. My contemporaries were apprenticed for five years, and had then three winter and two summer sessions at a hospital—a total of seven and a half years. During the apprenticeship we learnt not only pharmacy and something of the elements of the physical science of the day, but also, and although slowly and gradually often very thoroughly, much of what I have called the elements of clinical observation, and the seeds of our instruction fell into deep furrows. The schools of the present day are attempting, as it seems to me, to crowd too much work into a limited period, and such an attempt can only lead to disastrous failure.

I am, of course, familiar with the cry that it will not do to render medical education "too" expensive, and I reply that it is necessary to render it expensive enough to be complete. The difficulties of the practice of medicine are not sufficiently appreciated by the vulgar, more especially the vulgar rich, and the time has come when the public should be taught that the daily work of physicians can only be properly accomplished by men in whom intellectual powers above the average have been carefully and expensively trained for the fulfilment of special purposes. In the interests both of the community and of the profession it would often be well if the dull or imperfectly educated practitioner could be altogether eliminated, and made to devote his attention to matters within the compass of his ability. As a step towards the attainment of this object I once tried to induce my colleagues in the Examinations Committee of the General Medical Council to recommend that students who had been rejected a certain number of times, or who had not qualified within a certain period after joining a medical school, should be permanently excluded from the profession. A regulation of this kind exists in other callings and ought to be enforced in ours. A "chronic" medical student is lacking either in ordinary intelligence or in ordinary industry; and in either case he must be permanently unfit to be trusted with the lives and limbs of the community.

With many apologies for the length of this communication,

I am, Sirs, yours faithfully,

Dec. 1st, 1905. R. BRUDENELL CARTER, F.R.C.S. Eng.

THE FEEBLE-MINDED CRIMINAL.

To the Editors of THE LANCET.

SIRS,—From your article with the above heading in THE LANCET of Nov. 25th, p. 1556, it appears that the medical inspector of prisons, Dr. H. Smalley, suggests that a particular category of weak-minded offenders, "those incapable of conforming to ordinary penal discipline" by reason of mental defect, should be dealt with on special lines, meaning thereby, it seems, permanent detention in a suitable institution, where, it is suggested, whatever manual aptitudes they possess might be developed. Compared with the work of the New York State Reformatory at Elmira, as detailed by Mr. Havelock Ellis in his book "The Criminal" (my edition is the third), this appears a modest programme indeed, and one quite in keeping with the conservative method of progression which is so characteristic of this country. I should wish to point out that there are obviously—and as much may be inferred from your remarks—prisoners who manifest lesser, but still evident, degrees of mental defect who, unhappily for them, are able to rise to the peculiar standard (ability to conform to ordinary penal discipline) by which offenders appear to be tested (and which I must, for my part, continue to regard as a rude criterion, notwithstanding the justification set up in your article), and are consequently punished in the orthodox manner. That there are not a few such mental defectives in prisons I believe would be apparent upon a skilled investigation systematically carried out by anthropometric methods. My experience of cases transferred from prisons to asylums has been that such persons are obviously defective, apart from any superimposed and recent attack of insanity, and I believe they ought never to have been committed for trial, much less subjected to prison *régime* ("penal discipline"). I described such a case in the *Journal of Mental Science* for April, 1903 ("An Unrecognised Degenerate Punished by the Law"). This man was examined by an anthropometric scheme which I drew up[1] and which Mr. Ellis gives in his book referred to and showed difference from the normal standard in one half the measurements and in 43·5 per cent. of the observations comprising the descriptive signalment.

From your article it further appears that, apart from instances of real mental defect, there are, amongst these so-called "criminal defectives," cases of insanity in the shape of persons exhibiting "senile and alcoholic dementia and other forms of enfeeblement, rather inert and helpless than actively mischievous"; and these form "a not inconsiderable share" of the total of the criminal class under consideration. I shou'd say the only "suitable institution" which these unfortunates need is the nearest asylum. Many alienists and others have advocated special institutions for mentally defective criminals and pre-eminent amongst these is Dr. Jules Morel of Belgium, who, I believe I am right in saying, is still the medical inspector of Belgian prisons. Mr. Ellis states that Magnan advocates hospital-prisons for mixed cases whose sanity is doubtful and that separate institutions appear first to have been advocated by Dr. Koch, of the Würtemberg State Lunatic Asylum, in 1888. But, as Mr. Ellis asks, why should not all mentally defective criminals be placed in a reformatory of the Elmira type? I do not know what the latest accounts of Elmira are but at the date of Mr. Ellis's account (1901) it was evidently doing magnificent work. The aim of Elmira as there set out is not to devise a punishment to fit the crime, after the fashion of Mr. Gilbert's lord high executioner, or a mediæval inquisitor, but rather to provide an education to suit the criminal. Its programme, which is fully set forth in the work I cite, consists briefly in education, physical, ethical, and industrial. The criminals at Elmira were there at the date of the account under the system of the indeterminate sentence, though with the condition of a time limit, which, however, it was sought absolutely to abolish in favour of an unconditional indeterminate sentence. Cases were discharged on parole or at the expiry of sentence to earn their living at the trade taught them. During the 13 years from the opening of the reformatory to the end of 1898 nearly 9000 prisoners were received at Elmira. Whether released on parole or at expiry of their sentence 15·2 per cent. only were estimated to have "probably returned to criminal practices." In 1901 Mr. Ellis described Elmira as "the most promising direction in which we can turn for light on the treatment of the criminal." Just as in our treatment of the insane we are still hampered by the legal idea of the lunatic, the "alien" (no doubt some ponderous legal machinery will have to be set in motion before the mentally sick can be treated in a hospital block side by side with the physically sick as the acute cases ought to be), so no doubt, and probably to a much greater degree, is the prison physician hampered by the legal conception of the criminal and his crime. The law looms too large in these matters, for reasons which need not be entered into here, but which are not complimentary to the medical profession. Unless the Elmira system has turned out a failure, which one cannot imagine can be the case—on the contrary, I should expect to hear that it has been more and more widely followed since the date of my information—it would be interesting to learn why it has not been adopted here. It may have been, unknown to me, but I should judge not from your article. Another point upon which I think it would be interesting to have information is as to what facilities, if any, are afforded in this country to medical men who deal with the criminal classes to learn and to practise the methods of criminal anthropology, a subject which receives the attention it merits in other countries, such as Italy, France, and the United States, and by the study of which, combined with some knowledge of mental disorders (such as, I believe, the medical officers of prisons are now desired to have), cases of defective development of body and mind are to be recognised and classified, rather than, if I may be allowed to say so, by their ability to conform to "ordinary penal discipline."

I am, Sirs, yours faithfully,

EDWIN GOODALL.

Joint Counties Asylum, Carmarthen, Nov. 27th, 1905.

[1] THE LANCET, July 15th, 1899, p. 149.

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—Since my letter of Nov. 27th earnestly asking for pecuniary help I have received from a warm supporter of the College an offer of £200 if nine others will subscribe a similar amount to enable a payment which must be made of £2000 to our drainage contractor in the first week of January. I can but hope.

I am, Sirs, yours faithfully,

37, Soho square, London, W., Dec. 1st, 1905. C. HOLMAN.

THE ROYAL COMMISSION ON POOR-LAW.

To the Editors of THE LANCET.

SIRS,—I observe with astonishment, not unmixed with indignation, that the Royal Commission on Poor-Law, the *personnel* of which you published last week, includes no independent medical expert amongst its distinguished members. Is it possible that of all the medical men working in the Poor-law Service there is not one with sufficient knowledge, of eminence enough, to render him a fit person for this office? On what other ground can we explain such an omission? 99 per cent. of all the inmates of workhouses and workhouse infirmaries are either sick or aged and infirm. The medical officer has to undertake the care of all these, yet he is totally unrepresented on the body which is to indicate the rules which shall in future govern these institutions and their inmates. Or can it be that the forces which for so long have more or less successfully thwarted our efforts to bring the treatment of the Poor-law sick up to a modern standard have again been successful, have again secured the right to lay down the rules which shall in future govern the medical treatment of these persons? It is unnecessary, Sirs, to point out to you the great defects of the system, especially in the provinces, but perhaps I may mention for the benefit of your readers that in the addenda to the report of the departmental committee on the Nursing of the Sick in Workhouses (1903) is a paper of my own which deals with the subject from the medical point of view. The departmental committee failed to solve the difficulties of the task allotted to it. And not only this but in its recommendations it evinced a lamentable ignorance of the rudiments of the subject of its inquiries. Yet, Sirs, the only medical member of the Royal Commission was a member of this departmental committee, and eminent as he is as a Poor-law official, yet

his presence on the Commission cannot make up for its lack of independent medical men, men free from the habitual trammels of red tape and tradition—tradition founded upon the prevention of idleness and not upon the treatment of disease—a defect which strikes at the root of the Poor-law and renders to a great extent nugatory the elaborate system under which we at present groan.

I cannot but think, Sirs, that if your immense influence and that of your readers were to be exerted for the rectification of such an omission as that which I have indicated it would not be found too late to do so. As it stands it makes the Royal Commission a very weak one and inflicts a gross injustice amounting to an insult upon the medical profession. I am, Sirs, yours faithfully,

Fellows-road, N.W., Dec. 2nd, 1905. F. R. HUMPHREYS.

P.S.—I have already called attention to the matter in one of the daily papers.

"MATERNAL IMPRESSIONS."

To the Editors of THE LANCET.

SIRS,—Among the many existent popular beliefs about which there are many fallacies that concerning "maternal impressions" is one of the most common and abiding. That there may be some, if not much, truth in the popular explanation of certain phenomena in this connexion the following cases of interest may show.

A married woman has five children, all boys. The fourth was born 18 months ago with a hare lip and cleft palate. The first operation for its relief took place during his first fortnight and since then seven operations have finally led to complete success, leaving only a linear, slightly raised, scar as evidence of former deformity. When this child was about nine months old and still under treatment his mother again became pregnant and when her fifth son was born two weeks ago her first question was, "Is its lip marked?" Sure enough it was, not with hare lip or cleft palate but with a linear raised scar extending from the left nostril to the lip, identical with that of his brother. The mother tells me that at the time she became pregnant with her fourth son there were a man and woman in the same village each with hare lip and although she did not fear any evil result to her offspring from seeing them she was "constantly dreaming about them." When the fifth son was conceived she was very anxious about the elder child who, at the time, had the scar resulting from the earlier operation.

One might say these were cases of reversion or arrested development but this does not explain why arrest of development occurred. The popular idea of the mother's mental affecting the child's physical state seems reasonable in the cases quoted, I think. The important point seems to be the fact of the "impression" occurring at or about the time of conception, for, of course, the possibility of any maternal impression affecting the physical or anatomical condition of a fœtus of, say, three or four months would be unthinkable. I am, Sirs, yours faithfully,

Watford, Dec. 3rd, 1905. G. FRANCIS SMITH.

A NEW SURGICAL DRESSING—MICA.

To the Editors of THE LANCET.

SIRS,—I am greatly interested in the article by Mr. J. L. A. Aymard in your issue of Nov. 18th. I have long advocated the use of glass in dressings but for a totally different reason, not as in Mr. Aymard's case, purely as a non-irritating and convenient dressing, but because I believe sunlight to have a direct and beneficial influence on the healing of wounds. I, however, propose to try a number of cases before further rushing into print on the matter.

Being dissatisfied with glass I am experimenting with mica as a substitute, but as this material is opaque to violet rays, which are those which would be most beneficent in the healing of wounds, its use as a dressing for the treatment of wounds by sunlight is doubtful. For making a window for inspection over the damaged area, or for the purposes mentioned by Mr. Aymard, I am of opinion that it is in every way superior to glass; it bends without breaking; it can be used much thinner, consequently it is not so clumsy as glass; it can be fastened over the wound with strapping, and I have myself worn a piece strapped on my arm for a considerable time without it breaking or cracking; it enables one to dispense with a considerable amount of bandaging and is consequently cooler and more comfortable. By enabling the surgeon to inspect the site of injury without disturbing any dressings it is a source of great comfort to the patient and a great convenience to the surgeon, who in satisfactory cases can leave the first and only dressing on until the wound has healed instead of having frequently to change the dressings purely to ascertain how things are going on under it. I have subjected mica for a period of 24 hours to the following chemicals, &c., which might come in contact with it during use and I have been unable to find any change in the mica so used: Dry heat; boiling in water; carbolic acid lotion, 1 in 20; hydrarg. perchlor., 1 in 100; formaldehyde, 40 per cent.; pot. permang.; chinosol, 1 in 250; izal; glycothymolin; listerine; hydrogen peroxide; chloroform; and adrenalin. Messrs. Down Bros. are obtaining me the mica plates in different sizes. My method is to take three or four layers of gauze or lint, place them over the skin, a hole being cut through the layer of lint to leave the wound exposed; over this a mica plate is placed and the whole is fastened on with some adhesive plaster. These windows cannot be used everywhere or in cases with much discharge but they are possible in a considerable proportion of cases.

I am, Sirs, yours faithfully,

Leytonstone, N.E., Nov. 29th, 1905. ARTHUR TODD-WHITE.

SPIROCHÆTE PALLIDA AND LEISHMAN-DONOVAN BODIES.

To the Editors of THE LANCET.

SIRS,—It is not difficult to demonstrate in syphilitic lesions (at least in primary and secondary eruptions) a spirochæte identical in characters with those described by Schaudinn and Hoffmann, McWeeney, Dudgeon, and others. By fixing in alcohol and staining with Giemsa's or Leishman's mixtures I prepared slides from the fluids expressed from mucous tubercles of a case under Dr. F. J. Paley which showed numbers of these delicate spirillary bodies. If it is true that a spirochæte be a protozoon and a stage in the life-history of a trypanosome one might find in pseudo-diphtheritic angina, relapsing fever, &c., the Leishman-Donovan bodies of kala-azar, which is probably a trypanosome disease. In this respect and in its possible causal relation to syphilis the presence or absence of these bodies in syphilised man or apes would be of value as evidence. I cannot find any references in available literature of the subject so far.

I am, Sirs, yours faithfully,

Brighton, Nov. 29th, 1905. F. G. BUSHNELL.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In thanking you for your words of support and encouragement to the Members of this College contained in the leading article in your issue of Dec. 2nd, p. 1630, may I venture to suggest that these would be more valuable if published before instead of after the annual meeting? In the old days to which you refer THE LANCET always drew the attention of its readers to the meeting about to be held. This year I do not think there was a single anticipatory notice in the medical press.

As honorary secretary of the Society of Members I can fully endorse your statement regarding the principal reason for the poor attendance at these meetings. From letters which I constantly receive I know that many Members are sick of the College and all its works. If they are not wanted there they are more than willing to stay away; they cannot be expected to take any interest in the affairs of a College in which they are steadily denied any representation. The Council persists in regarding those of the Members who do attend as hostile to the interests of the College, than which nothing can be more absurd; in fact, the Council seems to imagine that it is conferring a favour on the Members by taking any notice of them at all, although they are the legal owners of the College property. While this attitude is maintained is it surprising that the Members, who after all form the bulk of the profession, take no notice of the Council?

There are, however, still a few hundred Members constituting this society who consider it their duty, in spite of official discouragement, to keep, as it were, the by-pass of reform alight until the time comes, as it certainly will, when College affairs will once more require full illumination. In the opinion of some competent observers the one-portal system of admission to the profession is already in sight. If the London Colleges hope to constitute that portal they will have to adopt a more liberal attitude towards the profession at large. Privilege and oligarchies are now completely out of date.

I am, Sirs, yours faithfully,

Dec. 4th, 1905. W. G. DICKINSON.

THE ACTION OF THE EXTERNAL MUSCLES OF THE EYE, AND THE DIAGNOSIS OF OCULAR PARALYSIS.

To the Editors of THE LANCET.

SIRS,—May I draw Dr. D. M. Mackay's attention to a paper which appeared in the *Clinical Journal* of March 27th, 1895, entitled "The Position and Rotation of the False Image in Paralytic Diplopia represented Diagrammatically"? The diagram which I there published shows the following points: (1) Direction of action of the muscles of the eyeball; (2) primary deviation of the eye in paralytic squint; (3) position of the false image in diplopia; (4) quality of the diplopia; and (5) rotation or torsion of the false image both for vertical and horizontal images. I venture to think that this diagram is as "concise and easily grasped" as the one Dr. Mackay publishes.

I am, Sirs, yours faithfully,

R. BRUCE FERGUSON, M.D. Cantab.

New Southgate, N., Dec. 2nd, 1905.

THE INVERSE RELATIONS BETWEEN PYREXIA AND GOUT.

To the Editors of THE LANCET.

SIRS,—In his letter on this subject in THE LANCET of Dec. 2nd, p. 1643, Mr. Joseph Birt pertinently asks whether the inverse relationship between acute disease and gout is to be ascribed to the pyrexia alone, no matter from what disease the pyrexia may have arisen. It is improbable that the origin of the pyrexia has *per se* any bearing on the result, for gout has been dispersed for shorter or longer periods by pyrexias having the most diverse origins. Thus tonsillitis, bronchitis, pneumonia, rheumatic and typhoid fevers, small-pox, vaccination, and various septic conditions, traumatic and other, have all proved effectual. On the other hand, the intensity and duration of the pyrexia appear to be of material importance. After an attack of acute sthenic gout which has been allowed to run its full course the patient is commonly free for a time from all gouty symptoms, articular and abarticular. But there is every gradation between acute and chronic articular gout. In these gradations inflammatory reaction and pyrexia are present in descending degrees. And, conformably, it is found that prolonged arthritis, articular deformity, continued ill health, and liability to subsequent attacks are present in ascending degrees. In chronic articular gout, indeed, the patient remains frankly cachectic. Hence possibly the pyrexia of pneumonia is a more efficient preventive of gout than the pyrexia of the most violent gouty arthritis.

It seems clear, however, that the pyrexia is salutary mainly in virtue of the increase of combustion implied in the process. For apyrexial conditions associated with increase of combustion are also effectual. Thus recurrent asthma, major epilepsy, and hard physical exercise of a purely physiological nature can be shown in some cases to have distinct inverse relations with recurrent articular gout. But it cannot be maintained that the increase of combustion is the sole salutary feature in pyrexia. I am arguing that exaggerated combustion operates by relieving the blood of its accumulated load of unoxidised or imperfectly oxidised carbonaceous material (hyper-pyræmia). On this view any restriction of the carbonaceous income to the blood should also operate beneficially on gout. And it can be shown that many affections not usually associated with increased combustion but with diminished income have clearly marked inverse relations with gout. Thus recurrent bilious attacks, migraine, and gastralgia associated with anorexia, even simple dyspepsia, have long been noted to alternate in many cases with attacks of articular gout. Hence, doubtless, the anorexia and dyspepsia associated with most pyrexias, together with the febrile regimen enjoined, are efficient reinforcements of the exaggerated combustion. At any rate, they would all conduce to the dispersion of hyper-pyræmia.

It is easy to see how pyrexia prevents for the time being the recurrence of the gouty paroxysm. But it is less easy to understand the permanent cessation of articular gout which sometimes succeeds an attack of some specific fever. Here, however, the permanence of the result can often be explained indirectly. It is recognised that the specific fevers often introduce a "change in the constitution." There may follow more or less chronic dyspepsia, recurrent bilious attacks, some of the paroxysmal neuroses such as migraine or asthma; or patients previously lean may become obese through enhanced power of fat-formation. And any of these would tend to prevent the re-development of articular gout. I am, Sirs, yours faithfully,

London, W.C., Dec. 4th, 1905. FRANCIS HARE.

SEVILLE AS A WINTER RESORT.

To the Editors of THE LANCET.

SIRS,—Seville has been "boomed" lately as a winter resort, offering especial advantages to those suffering from rheumatic and rheumatoid diseases. It is the earnest wish of both Dr. Karminsky, the German doctor resident here, and myself, the English doctor here, that the profession and the public should understand that the matter has not got beyond the experimental stage. We shall be glad to give statistics so soon as we have collected sufficient cases.

I am, Sirs, yours faithfully,

JOHN DALEBROOK, M.A. Oxon., M.R.C.S. Eng.,

Seville, Nov. 25th, 1905. L.R.C.P. Lond.

TETANUS AND ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—Many years ago I lost a brother from lockjaw; I therefore naturally take interest in the treatment of tetanus. In the Clinical Notes in THE LANCET of Dec. 2nd, I see reported "A Case of Tetanus Successfully Treated with Antitoxin." I have read the article most carefully but failed to find any improvement in the symptoms recorded until inhalations of chloroform were given, followed up by chloral and bromide of potassium. "The patient was fortunately able to swallow fluids during the whole illness," so the usual difficulty of administering suitable remedies by the mouth was absent. Having been in active practice for nearly half a century might I be allowed to ask you if there would be anything inconsistent with natural logic in suggesting that this patient got well from the *rational treatment* by chloral and bromides *in spite of* the antitoxin? I am, Sirs, yours faithfully,

Dec. 4th, 1905. B. H. H.

HAMMERSMITH BOROUGH COUNCIL AND THE DIAGNOSIS OF DIPHTHERIA.—The public health committee of Hammersmith borough council reported recently that it had fully considered the advisability of providing the department with the necessary appliances for testing all doubtful cases of diphtheria before the patients are removed to the hospital. The committee was advised that the adoption of the proposal would involve considerable capital expenditure and heavy establishment expenses, and as an alternative it had gone into the advisability of making other arrangements whereby facilities could be given to medical men to obtain diagnoses at the council's expense of suspected cases of diphtheria in the borough. The committee had ascertained that the pathological department of the West London Hospital would be prepared to undertake the bacteriological examination of specimens from the throats of persons suspected to be suffering from diphtheria at a fee of 5*s.* per case. The committee had resolved, subject to the usual sanction, to enter into an agreement with the West London Hospital authorities on the above basis for 12 months.

CHOLERA AND PLAGUE IN EUROPE AND THE EAST.

(FROM THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.)

THE course of the cholera outbreak in Germany since my last letter appeared in THE LANCET (Sept. 23rd, p. 913) may be summarised as follows.

From noon on Sept. 12th to noon on the 13th there were 15 cases of cholera and four deaths in the districts of Dantzig, Marienwerder, and Bromberg. On the 13th–14th nine cases and two deaths occurred in the same three districts and that of Colmar; on the 15th a fatal "suspected" case was observed on an Elbe ship at Mecklenburg; on the 14th–15th there were eight cases and three deaths in the districts of Dantzig, Königsburg, and Breslau; and on the 15th–16th three cases and two deaths in the Dantzig district. On the two days, Sept. 16th–18th, there were 13 suspected cases and six deaths, distributed as follows: single cases each in Lebus, Posen, Rastenberg, Breslau, Schubin, and Czarnikau; two cases each at Stettin and Grandenz; and three at Marienburg. On the 18th–19th seven cases and no deaths were recorded in five places in East Prussia; on the 19th–20th six cases and one death in the Breslau district; on the 20th–21st 14 cases with three deaths in the districts of Dantzic, Bromberg, and others; on the 21st–22nd nine cases with two deaths in the district of Dantzic, Posen, and Stettin; and on the 22nd–23rd seven cases with three deaths in East Prussia. On the 23rd the first case was observed in Berlin, the patient being a boatman. From Sept. 23rd to 25th four cholera deaths and five suspected cases were recorded in Prussia; on the 25th–26th there were no fresh cases; on the 26th–27th five suspected cases and two deaths occurred in and near Bromberg; on the 27th–28th two suspected cases at Wirsitz and Westhaveland; on the 28th–29th one case near Breslau; on the 29th–30th one case at Mocker, near Thorn; on the next two days there were no fresh cases; on Oct. 2nd–3rd there were two suspected cases and two deaths in the Marienburg and Georgenburg districts; on the two following days there were again no fresh cases; on the 5th–6th two suspected cases were observed in the Marienburg and Elbing districts; on the 6th–7th three suspected cases and one fatal case of cholera were recorded in the districts of Marienburg and Niederbarnin; on the 7th–8th no fresh case occurred; on the 8th–9th information is lacking; on the 9th–10th two suspected cases in the Marienburg and Westprignitz districts; on the next two days no fresh cases; from the 13th to the 16th information is lacking; on the 16–17th there was one suspected case in the district of Filehne; on the 17th–18th one suspected case in the Grettenberg district; and finally on the 18th–19th there were no fresh cases.

Since the date last named no further cases of cholera have been reported from any part of Germany and it has therefore been assumed that the country has been free from the disease. No known case occurred at Hamburg after Sept. 4th and on Sept. 20th the Constantinople board of health suppressed the "medical visit" which had been imposed on arrivals by sea from that port; on the 27th the disinfection and five days' surveillance in the place of arrival, which had been imposed on arrivals by land from Hamburg, were also suppressed. On Oct. 17th the like measures which had been imposed on arrivals by land from the province of Posen were abolished, and a week later the "medical visit," which had alone remained in force, was suppressed and the frontier sanitary stations on the Oriental Railway at Mustapha Pasha and Zibeftché were closed.

Austria seems to have been quite free from cholera since I last wrote to you save for a single imported case on Oct. 1st. The patient was a passenger from Breslau and was taken ill in the train near Oderburg. He was removed from the train at that station and isolated in the quarantine station there. From information communicated to the Constantinople board of health by the Austrian delegate it appears that of the cases originally reported from the village of Padew-Narodovo four were subsequently recognised as probably not cases of cholera, and that the case at Grodzisko was also declared to be a case of some other disease; the cases of true cholera in Austria were thus (the same authority continued) reduced to three.

The presence of cholera in Russia was first officially reported in the middle of September. On the 5th (18th) of that month the Governor of Warsaw announced that a woman had died from the disease at Voltslavsk, in the Warsaw government and that the diagnosis had been confirmed bacteriologically. On the 23rd it was officially reported that the two children of this woman had also died from this disease and that two other cases of cholera had been detected at Lodz, in Polish Russia. A little later the Russian Ministry for Foreign Affairs stated officially that between Sept. 1st (14th) and 11th (24th) there had been 27 cases of cholera in the three governments of Warsaw, Piotrkow, and Lomza. Up to Sept. 29th (N.S.) 38 cases of the disease and 29 deaths had been recorded in the Lomza government, distributed as follows: 21 cases and 14 deaths in the town of Lomza; three cases and three deaths in the district of that name; nine cases and eight deaths in that of Mazovetz; and five cases with four deaths in that of Ostrolenka. One more case had also been seen on Sept. 15th (probably Old Style) at Lodz.

On Sept. 29th and 30th there were 16 fresh cases and four deaths in the Lomza government, of which eight cases and two deaths occurred in the town and six cases with two deaths in the district of that name, and two cases in the Ostrolenka district. On Oct. 2nd (N.S.) there were four cases of cholera and one death at Lomza; on the 3rd, three deaths; on the 4th information is lacking; on the 5th, three cases and two deaths; on the 6th, three cases and one death; on the 7th, two cases and three deaths; and on the 8th, one case and one death. In the district of Lomza there occurred on the 2nd, one case and one death; on the 3rd, three cases; on the 4th information is lacking; on the 5th, seven cases and four deaths; on the 6th, two cases and four deaths; on the 7th, three cases and one death; and on the 8th, one case. At Lodz there were, on the 2nd, one death; on the 3rd, one death; on the 4th information is lacking; on the 5th, one case; on the 6th, one case; and on the 7th and 8th apparently no new case. In the Mazovetz district three cases of cholera were observed on Oct. 5th. In the week ending Oct. 11th there were in all 47 cases of cholera and 24 deaths in the Polish governments, distributed as follows: five cases at Lodz, 13 cases in the town of Lomza, 21 in the district of that name, six in the district of Mazovetz, and two in that of Ostrolenka. In the following week, ending the 5th (18th), the number of cases sank to 26 and of deaths to 14. Of these four cases occurred at Lodz, one in the village of Sterdyn in the Siedlec government, and the rest in the Lomza government. Finally, in the week ending the 12th (25th) there were only 12 new cases of the disease, of which four were "suspected" only. Of these 12 cases two occurred at Lomza, one at Tykotsin, two in the Mazovetz district, five in and near Lodz, and two in the Pultussk district of the Warsaw government.

The measures imposed in Turkey in consequence of the above outbreak of cholera in Russia have been confined to a "medical visit," disinfection, and five days' surveillance in the place of destination.

It will be recalled that six cases of plague were observed at Adalia, on the Caramanian coast, in the latter part of July and beginning of August.[1] After a long interval a seventh case occurred in the latter part of September. The patient was a boy, aged 16 years; nothing was stated as to his nationality or occupation; he was first seen on Sept. 24th, but had then been ill for eight days. An eighth case was seen on Oct. 6th; the patient was a boy, aged 12 years, and he also was said to have been ill for eight days before he was seen. No other case has since been reported. The only measure imposed in Turkish ports against Adalia was a "medical visit."

In June last reports reached Hodeidah, in the Yemen, that a heavy mortality was occurring at and near Kataba, from a disease resembling plague. In July there were fresh rumours of a similar disease at Nadra, Yerim, and Zimar, in the interior of the Yemen. Consequently on July 22nd the health officer of Hodeidah started to visit the district supposed to be infected. Owing to the war then in progress he was unable to reach any of the places named; but he succeeded in ascertaining that the mortality had been solely due to famine—which was very severely felt in the Yemen in the past summer—and that there had been no plague anywhere near the places named. He adds, however, that the

[1] THE LANCET, August 26th, 1905, p. 631.

plague outbreak at Aden which, it will be remembered, prevailed from November, 1904, to June, 1905, also spread to Sheikh-Osman, ten miles north of Aden and invaded the sultanate of Lahaj.

An outbreak of plague, presenting some points of unusual interest, has recently been reported from the Transbaikal province of Siberia. The facts as hitherto published are not as clear as they might be but are to the following effect. During the past summer it seems that disease appeared among the marmots, or *tarabagans*, in the neighbourhood of a settlement called Tsurukhutal and some Mongols who ate of their flesh fell ill and died. Some of the inhabitants of the settlement migrated to the banks of the river Mutnaia; on the banks of the same river a Cossack inhabitant of Dalai-Nor was occupied in field labour and he fell ill of plague on August 15th (all the dates that follow are according to the Old Style) and died on the 19th. All the other occupants of his house sickened one after the other and by Sept. 7th all had died. On Sept. 11th a bacteriological examination was begun and on the 13th all the surviving villagers were examined by a medical man, with the exception of the widow of the first patient. This woman, it seems, had fled first to the station of "Manchuria" and then to the village of Klitchki. A few days later the first case of the disease occurred at Manchuria; this patient died on Sept. 20th and early in October plague appeared in the village of Monastyr, close to Manchuria. In the meantime, on Sept. 4th, the same disease broke out in a Russian village one verst distant from the mines of Dalai-Nor. The first case was that of a Cossack who had come from "Manchuria"; then his mother fell ill and ten other persons who had come into contact with them were also attacked. Up to Sept. 13th there had been 12 cases and 10 deaths here. In the village of Klitchki (which is in the Transbaikal province, 110 versts from the railway station of Borzi) two suspicious cases of plague occurred on Oct. 7th, and two other cases in the same house on the 12th. A doubtful case was also imported to Nertchinsk from Manchuria, but this case has since been diagnosed as one of typhoid fever.

The association of a disease in marmots with a disease in man closely resembling, if not identical with, bubonic plague, has been observed on frequent occasions in two regions of Eastern Asia—one in the Aksha military district of the Transbaikal province and the other in the valley of So-len-ko, in Eastern Mongolia. (For a full account of this subject, summarising all the information that had then been published upon it, the reader is referred to an article by the present writer, published in the *Journal of Tropical Medicine*, February, 1900.) The outbreak above described appears to have taken place in or near the first of the two regions just named, but the information published up to the present is too scanty to justify the conclusion that in this instance the disease in man was truly the result of infection from diseased marmots. Medical men and bacteriologists were sent to the scene of the outbreak and it may be hoped that their reports will be published and will throw fresh light on this interesting question.

Constantinople, Nov. 29th.

THE PUBLIC-HOUSE AS A FACTOR IN THE SPREAD OF DISEASE.

(FROM A CORRESPONDENT.)

THE notice which my article to THE LANCET of Dec. 2nd has received regarding the influence exerted by public-houses in spreading disease emboldens me to send you a further communication as a sort of sequel. Pulmonary tuberculosis was the only pathological condition alluded to in my former article and I have seen comments which would seem to suggest that the mischief to which I alluded was thus limited. Pulmonary tuberculosis may be the most grave of the maladies, owing a serious amount of its spread to the use of the public-house as a popular place of meeting, but there are other diseases besides pulmonary tuberculosis that are bound to flourish under the generally unhygienic conditions which I have described. Diphtheria and other infectious diseases, syphilis, and all forms of skin disease are also disseminated by the agency of the insanitary, ill-kept, and inconvenient drinking-bar. Of course, these maladies are frequently conveyed from person to person wherever people congregate—for example, the place of worship may play its rôle in the spread of infection—but the conditions of the lower-class public-house are all conducive to excessive spread—that is my point. With the fear before me of being looked upon as a bar-loafer in many lands, I would like to state, judging from my own experience, that in a general way the drinking resorts in European cities are in a far superior sanitary condition and are better conducted than those of a similar class in British towns, while in the United States of America comparison is all in favour of the West. In the United States the majority of the saloons are clean and fairly well ventilated. They do not present the grimy appearance, nor do they possess the stuffy, suffocating atmosphere which so often characterise their British analogues. The American "bartenders" are always attired in clean linen aprons and jackets, the floors are swept and garnished thoroughly and constantly, and the counters are kept dry, bright, and polished, a wholesome condition, very unlike the dark, slimy, stained board upon which our countryman receives his slopping beverage. The private bar, upon the evils of which I dwelt last week, is absent in the United States and spitting, generally regarded by the Briton as a typical American custom, is now very adversely regarded. At any rate, spittoons are generally used in American bars by those who feel compelled to expectorate.

I come now to a feature in the way in which the English public-house—and especially the London public-house—is used which is, I think, distinctive as well as tragic and which counts in a particularly unfortunate way when the spread of disease is under consideration. I allude to the prevalent custom of women drinking at the bars. The *café* and the *brasserie* on the Continent are restaurants, not bars, and the presence of reputable women in them is explained by their desire to use them as restaurants. But in London perfectly respectable (I use the word "respectable" in its limited sense) women foregather in public-houses with the sole purpose of drinking and gossiping. Bishop Potter of New York raised a considerable storm in the temperance party of America not long ago by defending the existence of "saloons" on the grounds that they were the poor men's clubs. Most of us, however alive we may be to the evils of alcoholism, would not agree with the excellent prelate's definition, but men's clubs are not designed for women to drink at. The man may waste his time, health, and money at the public-house, but at any rate his work lies out of doors and his refreshment has to be obtained out of doors. When the woman goes out to drink she goes out, in many instances, on purpose to drink and her work, or that part of it which lies at home, is usually neglected. Women drink and frequent places in which drink is sold in the United States and on the Continent, but they do so in an altogether different fashion from that which rules in the poorer districts of London. So far as I know, and I have been in most of the large American cities, a woman will rarely be seen at a public bar unless her presence there implies that she is publicly consorting with men because she gets her living by intimacy with men.

Drinking among women is an evil the dangers of which can hardly be over-estimated. The drunken workman is sooner or later—generally sooner—detected, and many weak men perforce remain sober because they know that their employment depends upon their sobriety. But the drunken woman is under no supervision; all day she can neglect her house and starve her children and there is no one to say her nay. The degeneration of the British race physically has been a good deal assumed upon insufficient evidence, but no one can deny that the drunkenness of mothers must increase the number of faulty citizens. Poverty and drink bulk largely in bringing about race degeneration. We know that and need not stop to distinguish between cause and effect. Is a man ill because he is poor, or poor because he is ill? or does he drink because he is ill, or is he ill because he drinks? Such questions are constantly being answered by every medical man who has charge of an out-patient department in one way in one case and in another way in another case, but whatever the *causa causans* in an individual instance the fact remains that drink keeps many a household poor, that drink produces many pathological conditions, and that poverty will both produce pathological conditions of its own and aggravate those of other origin. The drunken woman, whose duties are supposed to be domestic, is a particular curse to the community because she has not

the check upon her that is supplied in the case of a man by the ordinary discipline of labour and because her children suffer in an appalling way physically and morally. I have got a little way from my original theme—the spread of disease by public-houses—but it is obvious that where women drink as well as men the chances of dissemination of disease are doubled, while the closer association of the women with the children makes the infection of the one a more than possible prelude to the infection of the other.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Reduction of Infant Mortality at Huddersfield.

A LITTLE more than a year ago the Mayor of Huddersfield, Mr. Alderman B. B. Broadbent, started a novel experiment. He undertook to give the parents of every child born in a particular district of the town a promissory note for £1, payable when the child was a year old. The mayor said that if the diminished mortality which had occurred was maintained next year it would mean a death-rate in children under one year of age of 54 per 1000, against 150 for the whole country and 144 for a ten years' average for Huddersfield and 122 for Longwood. The figures were almost as good in the adjoining township of Lindley. He stated, too, that there was less disease among the children. This experiment is exciting interest, for he said that he had received £185 towards an "infant mortality fund." He desired to acknowledge the great help of Dr. S. G. Moore, the medical officer of health, who might be regarded as the real author of the scheme. From the point of view of saving infant lives and of securing for those totally helpless better treatment and more kindly attention a great deal may be said for this scheme. From another point of view it may be looked on as a scathing condemnation of the mothers and a bitter reflection on their want of natural affection if it requires the bribe of a sovereign to insure such care of their children that they may have a chance of living a year. It is not a pleasant idea that with this prospect of £1 in 12 months there is less likelihood than there otherwise would be of a woman forgetting her sucking child.

Dec. 5th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Medical Institution.

THE biennial dinner of the Liverpool Medical Institution was held on Nov. 25th, Sir James Barr, the President, being in the chair. 150 gentlemen, including members and visitors, were present. Sir William Broadbent was the principal guest. The toast of "His Majesty the King" having been duly honoured, the toast of "The City and Port of Liverpool" was replied to by Sir Robert Hampson, formerly Lord Mayor of Liverpool. The President proposed the health of Sir William Broadbent in felicitous terms. Sir William Broadbent, in the course of his reply, alluded to the marvellous advances in medicine and surgery which had taken place during his medical career. Within his recollection the science of bacteriolology had arisen. Formerly certain diseases had received the name of zymotic, from the analogy between their course and the progress of fermentation. It was supposed that defervescence was due to the medium of the ferment being exhausted. The researches of Pasteur placed the theory of the infective fevers on an experimental basis and it was now in common knowledge that the infective organisms died, not through the exhaustion of the medium but through the formation of antitoxins. During his time he had seen great changes in the organization of the profession. In his early days specialism was looked upon with a certain amount of disapproval. Great changes had also taken place in the method of conducting examinations which led up to the present satisfactory results. The toast of "The Medical Institution" was replied to by Mr. T. H. Bickerton (honorary treasurer). A pleasing selection of music was rendered by the Idler's Quartette.

Birkenhead Hospital Bazaar.

The bazaar on behalf of the Birkenhead borough hospital, which was held last week, realised £3700. The proceeds will be applied to the provision of a new laundry, a mortuary, and internal alterations of the building.

Sanitary Inspectors' Association: Professor Boyce's Tribute to Sanitary Inspectors.

At the recent annual dinner of the North-Western district centre of the Sanitary Inspectors' Association Professor Rubert W. Boyce of the Liverpool University, in submitting the toast of "The Sanitary Inspectors' Association," gave an interesting account of his experience in New Orleans and British Honduras when investigating and advising in the matter of yellow fever. He spoke of the detection and inspection of disease, and said that the result of that experience taught him to believe that all English sanitary inspectors were capable of going abroad to-morrow and taking charge of the sanitation of colonial cities, as they were doing in Manchester, Liverpool, and other places. He felt certain that before many years had passed sanitary inspectors would be employed in increasing numbers in the work of maintaining our large towns in a sanitary condition. At present they were only on the fringe of it.

The Royal Albert Asylum.

The annual meeting of the supporters of the Royal Albert Voluntary Institution, Lancaster, for the feeble-minded of the seven northern counties, was held at Leeds last week. Sir John Hibbert, the chairman of the asylum, who moved the forty-first report, said that the institution had grown from a meeting of ten local gentlemen at Lancaster over 40 years ago and now contained 650 patients. The income last year was £23,688 and 2558 patients had been under treatment. Of that number 1437 had been discharged, of whom 377 had been much improved, 519 moderately improved, and 349 slightly improved. Many discharged patients were earning their living at trades, two or three had entered the army, and one had succumbed to enteric fever after serving with Dundonald's brigade at the relief of Ladysmith. The institution had had many generous benefactors, including Mr. and Mrs. Brooke, who gave £30,000 for the erection of the Brooke wing; Mr. Titus Salt, who gave £5000; Lord Ashton, who had built the Ashton wing; Sir Thomas Storey, who added the Storey home; and Mr. Herbert Storey, his son, who gave 5000 guineas for rebuilding the asylum's workshops. A strong appeal was now made for the erection of a reception department where new inmates could be housed and isolated for a short period before transference to the asylum to prevent risk of infection. After the re-election of the committees the meeting closed with a resolution to hold the next annual meeting at Manchester.

Dec. 5th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

Appointments in Connexion with the Surgical Teaching at the University.

THE promotion of Mr. H. Littlewood from the position of lecturer on practical and operative surgery to the professorship has been followed by two elections. Mr. R. Lawford Knaggs, M.A., M.D., C.M. Cantab., F.R.C.S. Eng., who has been demonstrator of surgical pathology, has been elected lecturer on practical surgery, and Mr. Walter Thompson, F.R.C.S. Eng., has been elected lecturer on operative surgery. Mr. Knaggs is succeeded by Mr. Harold Collinson, M.B., B.S. Lond., F.R.C.S. Eng., while Mr. J. F. Dobson, M.S. Lond., F.R.C.S. Eng., has been appointed to the new post of honorary demonstrator in surgery.

Extension of the Work of the Leeds Public Dispensary.

A long-felt desire on the part of the board of the Public Dispensary has been happily carried into effect by the amalgamation with the older institution of a recently launched dispensary on the south side of the river. As the honorary appointments to the latter institution were not made as the result of open competition it was very properly made a condition of the amalgamation that the gentlemen holding these appointments should all resign and submit themselves in open competition with any others who might desire to do so for election on the staff. The special work of the dispensary consists in the visiting of the poor,

other than those for whom provision is made under the Poor-law, in their own homes. Under the scheme of amalgamation there will be three districts on the north side of the river and two on the south side. A resident medical officer is appointed to each district, so that the number of residents will now be increased to five. Until new buildings are erected for the southern branch the two officers for the southern district will reside at the new buildings in North-street. Four new honorary officers will be elected to the two new districts, two in charge of medical cases and two in charge of surgical cases. At the parent institution there is, of course, a large out patient department, the *clientèle* of which is not limited to the dispensary districts, and work of this character as well as casualty wo k will be carried on at the branch also. At the parent institution a new appointment is to be made, that, namely, of honorary surgeon in charge of patients with affections of the throat and nose. All these appointments are to be filled up in accordance with the rules of the Leeds Public Dispensary by the special committee for that purpose.

What is Port Wine?

At the Gainsborough police court two men were prosecuted for selling under the remarkable designation of "genuine unfermented British port wine" bottles of a fluid which on analysis was described as a "dark red thin fluid, slightly acid in flavour and very sweet, with a specific gravity of 1049. It contained a large amount of sugar, a small amount of this being fruit sugar. There was no alcohol in it, and it bore no resemblance in taste or in smell to port wine." The defence was somewhat amusing. One of the prisoners stated that he was a fruit wine maker and had followed that occupation for 40 years. He had sold the wine in question all over England, Scotland, Ireland, and Wales. The Excise authorities would not allow him to have any alcohol in it, and he complained that if those people who had bought the wine had not been so eager to taste it, and had let it mature a little, the sugar would have fermented and there would have been alcohol in it. The other prisoner admitted saying that people could not buy similar wine in any hotel in the town under 2*s.* 3*d.* a bottle, which statement was doubtless strictly true, for as the prisoner naïvely remarked he did not know anybody else who sold it! Fines of £3 and £1 were imposed respectively in the two instances.

Dec. 4th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Ambulance Work in the North.

THE annual meeting of the Durham Mines Inspection District Ambulance League (comprising South Durham, Westmorland, and the North Riding of Yorkshire) was recently held in Newcastle. It was reported that 1650 students had been successful in obtaining the St. John First Aid Certificate during the past year, in addition to the 2600 who were trained during the session 1903–04. The work was in every way satisfactory and in nearly all the districts there was an increase of members. The committee decided to approach the education authorities of Durham and North Yorkshire with a view to grants being made to ambulance classes. It was also decided to arrange for lists of men specially trained in ambulance work to be posted in a conspicuous place at the mines and quarries in order that their services might readily be obtained in case of accident. The rules for the competition for the Challenge Shield have been revised and improved. To increase the interest taken in ambulance work the officers of No. 6 district of the St. John Ambulance Brigade have launched a scheme by which they hope to have several challenge cups to offer for competition during the winter.

Report on Vagrancy at Gateshead.

At a recent meeting of the Gateshead guardians the workhouse master presented a report on this subject. During a period of four weeks all the tramps passing through the wards had been examined. It was found that 23 were married, 35 were widowers, and 339 were single. There were 268 who had seen no military service, 98 had been in the army, 27 in the militia, and 4 in the navy. Though many of the men admitted that their condition was due to drunkenness the majority seemed of an easy roving disposition, caring little for the morrow and happy in being "homeless, ragged, and tanned." There were very few genuine "out of works," though most of the men asserted that they belonged to this class. The great majority were strong and healthy and of athletic appearance, with a power for work much above the average Gateshead labourer. The master concludes that casual wards do more harm than good. They encourage men to go about the country seeking work which they never mean to find and even if they do honestly wish employment an immense amount of energy is wasted by men tramping from London to seek "jobs" at some public works of which they have heard in Newcastle and *vice versâ*. In the interest of the tramp the wards would be better closed, and closing them appears to be the only way of doing any good in the tramp question.

Dec. 4th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS)

Boards of Guardians and the Vaccination Acts.

THE Corwen (Merioneth) board of guardians has been forwarding to various boards of guardians in the West of England a copy of a resolution which it is sending to the Local Government Board and asking for their support. The resolution expresses the opinion "that the Vaccination Acts should be thoroughly revised and the cost and administration of the same be amended, so that only the children of paupers be vaccinated or re-vaccinated at the expense of the ratepayers." Most of the boards decided that the letter "lie upon the table" but those at Liskeard (Cornwall) and Clutton (Somerset) unanimously resolved to support it.

The Exeter Dispensary.

For some time past the members of the honorary medical staff and the committee of the Exeter Dispensary have not been working harmoniously together. At a recent meeting of the committee the honorary staff made some suggestions for the provision of the x ray and Finsen light, but the proposals were rejected. The staff were then confronted with a lengthy statement, which mentioned, amongst other things, that the average time each medical officer devoted to each patient was one and a half minutes. Complaint was made that £53 were expended in alcohol among a total of 5400 patients. Exception was taken to the time during which patients were kept waiting; on one occasion a medical officer was one and a quarter hours late and this was said to be "generally the case." It was further stated that patients were decreasing. In conclusion, it was added that the only effectual remedy was the provision of a salaried resident medical officer whose duties would be to assist the honorary staff. The honorary medical staff have now resigned in a body and the committee has called a full meeting of the subscribers to deal with the matter, and until then the staff will continue their services. It is to be hoped that an amicable arrangement will be arrived at between the staff and the committee.

The Abuse of Medical Institutions.

At Torquay on Nov. 28th, under the auspices of the Charity Organisation Society, an interesting paper was read by Dr. W. Makeig Jones on the Better Use of Medical Charities. The Mayor presided. Dr. Jones contended that every hospital patient should be required to pay a certain sum for the relief received and if unable to do so should be regarded as a pauper and attended by the Poor-law medical officer. Mr. G. Young Eales said that the chief cause of the abuse of medical charities was a decline of that spirit of self-reliance and self-respect which animated their forefathers and the only way to get rid of this abuse was the proper education of the people. The Rev. J. Charteris Johnston stated that it was in connexion with the out-patient department of hospitals that the greatest amount of abuse took place and added that general practitioners had their incomes unfairly reduced in consequence.

Dec. 5th.

NEW HAMPSTEAD GENERAL HOSPITAL.—This hospital will be opened by Her Royal Highness the Princess Christian of Schleswig-Holstein, the patron, on Saturday next, Dec. 16th, at 3 o'clock.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Medical Society of Edinburgh.

THE fourth ordinary meeting of this society was held on Nov. 24th, when Dr. A. W. Neill delivered his presidential address. He took as his subject "Sydenham, the Father of Modern Medicine," and first outlined the more important events of Sydenham's life. Thereafter he proceeded to criticise the man and his work, emphasising those points in which Sydenham was in advance of his contemporaries and comparing him with Harvey, especially as regards their respective motives and methods. A hearty vote of thanks was propsed by Dr. L. S. Milne and seconded by Mr. T. B. Johnston. Dr. Rousseau presented a typical case of pernicious anæmia and showed some excellent specimens and microscopical preparations. Dr. Graham moved, and Dr. Chambers seconded, a vote of thanks, which was spoken to by numerous members.

Abuses of the Sale of Food and Drugs Act.

In a case which recently came into the Glasgow sheriff court, in which a food inspector alleged that raspberry wine supplied by the defendants was not of the nature, substance, and quality demanded, the sheriff, in a note to his interlocutor, commented very severely on the excessive zeal of the public health authorities in the application of Section 6 of the Sale of Food and Drugs Act of 1875. The statute, he said, was designed simply to prevent the adulteration of food and drink and to protect the purse and stomach of the public against fraudulent traders. But of recent years it had become a fashion for local public health officials (without any consideration for the hampering effect upon honest trade and manufacture) to set up for themselves some academic theory about "nature and substance," or some arbitrary theoretic standard of "quality," and then to prosecute the sellers of goods which do not conform to those theories, however harmless or even wholesome the drink itself might be.

A Nitrous Oxide Cylinder Explosion.

Last week a cylinder of nitrous oxide burst in a Glasgow firm's works, causing the death of one of their employees. The cylinder had been sent into the works as empty to be refilled. Apparently, however, the valve had become choked and the gas being unable to get out the cylinder instead of being empty was full of gas at high pressure. One of the workmen whose duty it was to refill the cylinders applied a hot blowpipe flame to the neck of the cylinder to melt the solder with which the valve was held in place. Owing to the expansion of the gas with the heat the cylinder burst, killing the workman who was carried 12 feet through the air by the force of the explosion. The cause of the accident is not without interest to dentists and medical men who use nitrous oxide as a general anæsthetic.

The University of Aberdeen Quatercentenary Publications.

A distinguishing feature of the quatercentenary celebrations to be held next September will be the large number of "University Studies" which will be issued to signalise the event. The publication of so many volumes has been rendered possible by the munificence of Mr. J. E. Crombie, the Lord Rector's assessor, who has undertaken to guarantee a great portion of the necessary outlay. The publications subcommittee has now arranged a programme which has been approved by the general committee and of which the following is a summary. A certain number of copies of each book will be reserved for presentation to delegates from universities and to other notable guests; the remainder will be offered for sale to such as may wish to preserve mementoes of the celebrations. It is intended that all members of the general council of the University shall receive due intimation of the quatercentenary and that a special invitation shall be sent to every honorary graduate and to every alumnus who matriculated at either King's or Marischal College not later than 1850. The volumes in preparation are: 1. "Studies in the History and Art of the Eastern Roman Provinces, by Graduates of Aberdeen University." This volume, which will be copiously illustrated, will be edited by Professor W. M. Ramsay, and will contain contributions from the editor; Mr. J. G. C. Anderson, Christ Church, Oxford; Professor Alexander Souter, Mansfield College; Professor Thomas Callendar, Queen's University, Kingston; Miss Mary E. Thomson, Aberdeen; Mr. W. M. Calder, Oxford; Miss A. Margaret Ramsay; and others. 2. A "Festschrift" in honour of Professor D. J. Hamilton (who in 1906 will enter on the twenty-fifth session of his tenure of the chair of pathology), to be written, and the entire cost of publication defrayed, by a number of his most prominent pupils. This volume will be edited by Dr. William Bulloch, lecturer on bacteriology in the London Hospital Medical School, and will contain contributions on pathological subjects by the editor; Professor A. R. Cushny, University College, London; Professor W. St. Clair Symmers; Professor J. J. R. Macleod, Cleveland, Ohio; Dr. W. Leslie Mackenzie, Local Government Board of Scotland; Dr. Arthur Keith, lecturer in the London Hospital Medical School; Dr. George Dean, Lister Institute of Preventive Medicine; Dr. G. F. Petrie, Lister Institute; Dr. William Hunter, Government bacteriologist, Hong-Kong; Dr. G. A. Finlayson, Government bacteriologist, Singapore; Dr. Duncan, Dr. Fraser, Dr. Laing, Dr. Low, and Dr. Russell, Marischal College; and others. 3. A new series of the "Flosculi Græci Borealles," edited by Professor John Harrower, and contributed to by many of his more distinguished pupils during the past 20 years. 4. "The Roll of Graduates of the University of Aberdeen, 1860–1900," edited by Colonel William Johnston, C.B., of Newton Dee. 5. "Studies in the History and Development of the University of Aberdeen," edited by the Convener of the Publications Subcommittee, and contributed to by Principal Lang, Professor Cowan, Professor Davidson, Professor Gilroy, Professor Kennedy, Professor Nicol, Professor W. Stephenson, Professor Terry, Professor J. W. H. Trail, Mr. J. Malcolm Bulloch, Mr. R. S. Rait, and the editor. 6. The contribution of the Students' Representative Council: a new and revised edition of the late Neil Maclean's "Life at a Northern University," edited by Mr. W. Keith Leask. 7. A "Handbook to the City and University of Aberdeen," the municipal part to be prepared by the city chamberlain and the academic by the secretaries of the University Court and the Senatus. 8. A "Record of the Quatercentenary" to be issued at a subsequent date.

Dec. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Direct Representation of Ireland on the General Medical Council.

Sir William Thomson's recent statement to the General Medical Council dealing with the grievances of the medical practitioners in the poorer parts of Ireland will, I think, go far to secure his election as Direct Representative for this country. Dr. Leonard Kidd of Enniskillen, who forwarded an address to the registered practitioners of Ireland some weeks ago, is now his only opponent. The election will take place early in February.

Royal Hospital for Incurables, Dublin.

The annual sale of work executed by the patients in the Royal Hospital for Incurables during the year was opened on Dec. 3rd by the Earl and Countess of Wicklow who visited the institution at 3 o'clock. Mr. William Fry, jun., received them and explained that the hospital accommodated over 200 patients and was therefore an important addition to the charities of Dublin.

The Handy Woman.

At an inquest held in Bangor, co. Down, in reference to the death of a married woman named Burns it appeared that she had been attended by an uncertified handy woman. It came out from the medical evidence that in the course of the labour the handy woman, being alarmed, sent for medical help. When this arrived the patient was suffering from severe hæmorrhage—she was described as "cold, pulseless, and unconscious." On examination an internal wound was found three inches in one direction and two inches in another direction at right angles. Labour had scarcely commenced. The child was born dead and the mother, who was removed to a cottage hospital, died subsequently from "blood poisoning and puerperal fever." The wound was said not to be a spontaneous affair. The deceased woman, according to the

medical evidence, said the midwife had some whisky. After a long consultation the jury returned the verdict—

That Mrs. Elizabeth Burns died on Nov. 26th, we believe from blood poisoning, produced in some way, and from the evidence before us we are unable to find any direct cause; and the strange fact about this case is that the patient lived so long in the very weak state she was in on the day of her confinement. We also add that, in our opinion, all similar cases should, and in fact must, be attended by a certified nurse, unless a doctor has charge of the confinement.

Tughan v. Darnell.

The well-known case of Tughan v. Darnell is again to be reopened. It will be remembered that it was an action in which the father, George Tughan, sued a medical man, Mr. C. K. Darnell of Bangor, co. Down, for alleged negligence in the treatment of his son. The case was twice tried in Belfast; on the first occasion the jury disagreed, and on the second a verdict for the defendant was found. Plaintiff moved in the Divisional Court for a new trial, on the ground of alleged misdirection by Mr. Justice Wright at the trial and that the verdict was against the weight of evidence. The Divisional Court refused the application and from the decision the plaintiff appealed to the Court of Appeal and on Nov. 30th the judges unanimously allowed the appeal with costs of the appeal, but all other costs to abide the result. Consequently there will now be a third trial, unless Mr. Darnell should himself appeal to the House of Lords. What these protracted proceedings mean in money your readers can guess.

Medical Appointments in Ireland.

At a meeting of the Swinford (co. Mayo) board of guardians, on Nov. 29th, there was an election for dispensary medical officer for the Kiltimagh dispensary district. There were several candidates but the real contest was between Mr. G. P. O'Beirne and Mr. M. J. Madden. The former sought the office as an "Irish-speaking" man and as the nominee of the Gaelic League, while the latter was the candidate of the United Irish League. Mr. Madden was appointed by 17 votes to 10, the chairman being reported as saying, "We, indeed, would be a very sorry figure before the Catholic world and the Catholic bishops and priests of Ireland if we elected a Queen's College man and cast aside the Catholic University student who had to bear the brunt of the battle for Catholic rights." The sorry figure is cut when a medical man is selected to fill a medical post for other than medical reasons.

Queen's College, Belfast.

The fourth list of subscriptions, published on Dec. 2nd, brings the amount subscribed to the fund for the better equipment of the College up to £16,757 15*s.* 6*d.* Among the names is that of a very distinguished old student of the College, Sir Robert Hart, Bart., G.C.M.G., of Peking, who gives £500. In order to fulfil the conditions of Sir Donald Currie's offer of £20,000 it is still necessary, before Dec 24th, to obtain the remaining £3242 and it is hoped that all old graduates who have not yet contributed will do so before Christmas Day.

Health of Belfast.

The health report presented at the monthly meeting of the Belfast corporation held on Dec. 1st showed that between Oct. 22nd and Nov. 18th 234 cases of zymotic disease had been reported—viz., 100 cases of scarlet fever, 45 of typhoid fever, 41 of erysipelas, 22 of simple continued fever, 19 of diphtheria, six of croup, and one of puerperal fever. The death-rate from all causes was 20·8 per 1000. Cases of enteric and simple continued fever have considerably decreased, while there is a slight increase in the number of cases of diphtheria and erysipelas. There is a considerable increase in the number of cases of scarlet fever, with five deaths, and the disease is prevalent in all districts of the city but is fortunately of a mild type.

Dec. 5th.

NEW ISOLATION HOSPITAL AT MELTON MOWBRAY.—A new isolation hospital, which has been erected at a cost of nearly £9000, was formally opened at Melton Mowbray on Monday last. It provides accommodation for two fever wards, containing six beds each, and four isolation wards, of two beds each. An administration block contains provision for five nurses and a matron. The hospital will be under the joint auspices of the Melton Mowbray urban and rural district councils and the Belvoir rural district council.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Eupeptic Action of Sodium Citrate.

AT the meeting of the Hospitals Medical Society held on Nov. 14th M. Variot drew attention, as he had done before, to the action of sodium citrate. This salt when administered to sucklings facilitates the digestive processes and, above all, has an action in preventing vomiting if administered before the child is put to the breast. The action of the salt in preventing vomiting is very marked. Further, if it be added to cow's milk, to which is then added rennet or gastric juice, coagulation is either prevented or greatly modified. Contrary to the statements of some observers sodium citrate does not precipitate the lime salts in the milk but rather increases their solubility. The salt is harmless. M. Netter, who followed, said that he considered sodium citrate to be an excellent drug. The experiments of Sabattini had shown that the formation of calcium citrate, by saturating the lime, prevented the action of the rennet on the milk. M. Mathieu thought that the citrate of sodium was superior to the bicarbonate, for it did not cause a secondary secretion of acid in the stomach. The hydrochloric acid combines with the sodium and the citric acid set free is by no means irritating. Sodium citrate is also most useful in the dyspepsias of adults.

The Effects of Lumbar Puncture on Lichen Planus.

M. Thibierge and M. Ravaut have recently examined the cerebro-spinal fluid in nine cases of lichen planus and in eight of these it was normal. But the observers noticed with astonishment that within a few hours of the first puncture the pruritus diminished considerably. In one patient shown at the Dermatological Society on Nov. 9th the eruption, which had improved a few days after the first puncture, disappeared entirely after the second. Previously to this the aspect of the eruption had been modified; the papules were paler and began to desquamate. The effect of the puncture on the pruritus appeared to M. Thibierge and his colleague to be marked in direct ratio to the intensity and extent of the lichen.

Treatment of Gonorrhœal Rheumatism by the Method of Bouchard.

M. Jacquet and M. Sezary have been treating gonorrhœal rheumatism by the method of Bouchard, which consists in the use of a 5 per cent. solution of sodium salicylate, one or two cubic centimetres of which are injected as deeply as possible into the tissues around the affected joint. On Nov. 23rd the two observers made a communication on the subject to the Société de l'Internat of the Paris Hospitals. They found that this treatment diminished the pain in most cases very rapidly and in some cases finally. In a joint in which the pathological process had only just begun one injection stopped it altogether. In other cases the injections had to be repeated but they acted remarkably well considering that all other means of treatment had been tried without result. In many of the cases which came under the care of M. Jacquet and M. Sezary the functional troubles, such as, for instance, inability to walk, were very marked and in one case dated back some five years.

Results of a Gunshot Wound of the Brain.

At a meeting of the Anatomical Society held on Nov. 17th M. René Marie showed the brain of a man who had been shot with a revolver in the temple. He developed hemiplegia with contractions and died 16 years later. At the post-mortem examination the track of the ball was clearly seen; it had entered at the foot of the ascending parietal and ascending frontal convolutions, passed through the centrum ovale, perforated the lateral ventricle, and had stopped at the internal surface of the brain, the grey matter having escaped injury. M. Cornil pointed out that there were bony vegetations of the dura mater at the level of the wound of entrance.

First-aid Boxes at Metropolitan Railway Stations.

The municipal council of Paris has just asked the directors of the Metropolitan Railway to put up first-aid boxes in their stations. The request has been referred to the committee of the company.

The Bibliothèque Centrale de l'Internat.

On Nov. 20th was opened at 3, Avenue Victoria, the headquarters of the Administration of the Assistance Publique, the Bibliothèque Centrale de l'Internat. This library was instituted by the Directorate of the Assistance after friendly consultation with past and present internes.[1] The library will be open from 2 to 5 and again from 8.30 to 9.30 P.M. In case of necessity, however, readers may obtain an extension of time up to 6 P.M. and 11 P.M. On furnishing proof of identity both past and present internes of Paris will be admitted. All communications or donations of books and the like should be addressed care of M. le chef de cabinet du Directeur de l'Assistance Publique, chargé de la Bibliothèque Centrale de l'Internat.

Centenary of the Paris Medico-Chirurgical Society.

On Nov. 20th the Medico Chirurgical Society celebrated its centenary. The scientific meeting was held at 4.30 P.M., when the Dean, M. Debove, presided, and M. Liard, rector of the Academy of Medicine, was present. The general secretary of the society, M. Boursier, welcomed the delegates present who represented sundry French and foreign medical societies. M. Denos, the President of the society, then made a speech in which he traced the evolution of the medical practitioner throughout a century and the spread of knowledge of medicine among lay people. He also referred to the various modifications which had arisen in the relations between the aristocracy of the profession, such as professors and consultants, and ordinary practitioners. Finally, M. Debove made an interesting speech and in the evening a banquet took place at the Hôtel de l'Elysée Palace. Various toasts were drunk and a soirée was held afterwards at which the members of the society and many ladies were present.

The Comparison of the Sanitary Statistics of Paris with those of Berlin.

At the Academy of Medicine on Nov. 21st M. Löwenthal read a communication upon the above subject. He considers the sanitary condition of Paris to be pitiable compared with that of Berlin. First of all he criticised severely the methods employed in Paris for compiling our official statistics. For instance, these statistics take no account of the very considerable mortality of infants under one year, and so, in a town which possesses relatively few infants, the mortality appears to be lower than it should be. The 677,000 children in France between the ages of 0 to 1 year gave in 1902 almost as high a mortality as the 20,000,000 of French people of from one to 29 years—viz., 138,000 as against 148,000. The mortality of Berlin, where there are many more children than in Paris, should therefore be regarded as a much lower mortality. The total mortality of France is 23·2 per 1000, which is much less than that of Berlin, which is 25·8 per 1000. Paris has a legitimate birth-rate of 15·9 per 1000 persons. Berlin, on the other hand, has a legitimate birth-rate of 23 per 1000 persons. The illegitimate birth-rate of Berlin is 3·8 per 1000, which is inferior by 65 per cent. to that of Paris. At Paris, and still more in Berlin, the family birth-rate (*natalité dans les ménages*) is decreasing, a state of things due to the general spread of Malthusianism; but the rural population of Prussia is unaffected in this way, although the practice seems general thoughout France. Here are the comparative figures for the birth-rate per 1000 inhabitants. France: capital towns, 22·2; ordinary towns, 22·3; rural districts, 21·3; average, 21·7. Prussia: capital towns, 25·8; ordinary towns, 33·3; rural districts, 39·8; average, 37.

Dec. 4th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The Roman School: "Strike" of the Students of Medicine.

WHILE the British medical schools are keeping "the noiseless tenour of their way" and are each of them earning the praise bestowed by Carlyle on Arnold's house at Rugby as "a temple of industrious peace," the Roman School of Medicine has since the beginning of November been the scene of turmoil and tumult, ending in a "sciopero" or strike disastrous to the immediate interests of the students and fraught with evil example to their "confratelli" in the sister seats of learning. Not that the "studenti scioperanti" are without a grievance, which may explain, if it cannot altogether excuse, their conduct. Far from it. Their case is, indeed, a hard one, and to be appreciated properly will require a little "anamnesis" or "previous history" of the conditions under which they have laboured and which have resulted in their present, be it hoped only transitory, suspension of work. A Roman medical student's programme in the last three years before graduation includes the following obligatory courses: pathology, medical and surgical; materia medica, "medicina operatoria"; legal medicine; pathological anatomy; and clinical courses in ophthalmic medicine, in dermo-syphilopathy, in obstetrics, in psychiatry, in hygiene and "polizia medica," as well as in medicine proper and surgery. Of these courses, only two, those of hygiene and pathological anatomy, have really made a start; the others must, it seems, wait till the Policlinico—the great unfinished edifice outside the Porta Pia—is ready for them. 15 years has the Policlinico, founded by Baccelli, been in construction; but in the day now passing it is still short of wards, class-rooms, and the *matériel* of clinical teaching. As a way out of the *impasse* the governing body of the University had recently arranged that the student should attend the courses above indicated at the various hospitals and institutes scattered over the city, thus compelling him at a sacrifice of time, of money, and in bad weather of personal comfort to make the journey from the Policlinico on the south-eastern rim of Rome to the great hospital of the Santo Spirito on the north-west, a journey costing 2½*d.* in a tramcar; then from the Santo Spirito to the Istituto d'Igiene in the Via Palermo, another journey costing 2*d.*; then from the Istituto d'Igiene back to the Policlinico, a third journey costing 1½*d.*, and so on, till by the time he had completed his attendance on the required courses he had consumed much of the day *en route* and spent at least a franc. As an alleviation of one inconvenience—viz., the cost of transit—the students petitioned for a reduction of fares, but this the tramcar companies peremptorily refused, so by way of protest all the medical undergraduates from the first year to the fourth went out "on strike" and spent in indignation meetings and "demonstrations" (remotely anatomical) the time which they should have devoted to attendance in the clinical ward, class-room, or laboratory. On Dec. 1st they carried out another item in their programme of insubordination—a programme directed to making all instruction, medical and even non-medical, impossible till they had forced the governing body of the University to give practical effect to their wishes. They invaded, *en masse*, the lecture room of the professor of physics (the venerable Pietro Blaserna, senator of the kingdom and president of the Accademia dei Lincei, the Royal Society of Italy) and called upon him to quit the chair. Professor Blaserna remonstrated with them in a vein of pleasantry which seemed to irritate them the more, for they proceeded to shout and brawl and damage the physico-mathematical apparatus of the room, while others went out and picking up gravel from the neighbouring garden tried to smash the windows with the "small shot" till the students whose lecture had thus rudely been interrupted "went for" the ring-leaders of their medical "confratelli"—the whole ending in a fight in which victory favoured the stronger battalions. They then proceeded to the chemistry class-room and forced the professor (the Senator Cannizzaro) to suspend his lecture. They did the same with Professor Angelo Celli (lecturer on hygiene) and then marched to the University itself—their previous exploits having been confined to outlying institutes—and after "inviting" the natural history professor (Dr. Antonio Carruccio) to "shut up" they assembled in the great quadrangle, where they were brought to silence by the rector, Professor Alberto Tonelli, who thereafter assured them that at 4 in the afternoon the Consiglio Accademico would meet and consider their grievances. A move was then made for one of the unoccupied halls and the "studenti scioperanti" were proceeding to bring forward and to discuss motions when the rector

[1] There is no literal English translation of the word *interne*. An interne is a student of medicine whose duties correspond to those of a house physician, house surgeon, or resident medical officer in a British hospital to a certain extent. But an interne is not qualified, although he may have passed all the examinations except his thesis for the doctorate. The regulations say of internes, "If they are received as doctors during their term of office, they shall immediately resign their posts. An exception is made in favour of internes of the fourth year, who may sustain their thesis during the last two months of their appointment." The Internat is the whole body of internes whether past or present.—ED. L.

again intervened, only to be told that the students had decided to assemble once more in the quadrangle at the hour of the meeting of the Consiglio and to await the result. To this the rector replied: "But if 250 students are met in the quadrangle while we are deliberating how can I guarantee the calm development of our proceedings? Pleading your cause, how can I do so with effect when I have one ear open to my col'eagues in council and the other open to you in the quadrangle? Better disperse for the day and not disturb your fellow students in the other faculties." "We want none of your expedients," called out one of the medical undergraduates, "we want our cliniques." "Your grievance is justified," rejoined the rector. "The delay in getting ready the accommodation at the Policlinico rests with the contractors, who are taking three months for what might have been finished in one." Again he recommended them to disperse, and this time he was seconded by the approving shout of the law students; but, again, a medical undergraduate insisted on their determination to await in the quadrangle the resolutions of the Consiglio Accademico, adding that if these were not satisfactory, they would next day repeat at other institutes the "demonstrations" and the damage they had wrought that forenoon. In the end the mild rector prevailed, and at 4 P.M. the Consiglio met undisturbed. The discussion was very animated and all were agreed in deploring the scandalously deficient equipment of the medical school in accommodation and *matériel*, of which the students justly complained. Finally it was resolved that on Dec. 15th the medical and surgical cliniques at the Policlinico should be opened for instruction; that on Jan. 1st the Clinica Pediatrica should be inaugurated; that on Jan. 11th the ophthalmic wards should be available for the students; and so on till the other cliniques were all ready. These resolutions were transmitted to the Prime Minister (Signor Fortis) and the Minister of Public Instruction (Signor Bianchi), while arrangements would be carried out between the town council and the tramcar companies to convey the students at reduced fares. The rector, after communicating to the undergraduates assembled in the quadrangle the resolutions come to by the Consiglio Accademico and transmitted to the Government and the town council, had painfully to admit that the said resolutions, even if promptly carried into effect, did not meet the exigencies of the situation, and on retiring became aware that the students were determined on continuing the agitation and remaining on "strike." In fact, his back was barely turned when they reassembled in a vacated hall and with perfect decorum moved and carried this "order of the day": "The students of medicine in the Royal University of Rome, while deeply grateful for the intervention of Signor Tonelli, their rector, resolve to continue the 'strike' till their indisputable rights are respected. As regards the vital question of the reduction of the tramway fares, they decline to pose as mendicants before the directors of that meritorious service, it being the duty of the authorities, civic and educational, to provide for the required attendance at the official and private lectures in the very remote Policlinico." The meeting then broke up.

The leading Roman journal, the *Tribuna*, gives the report of its commissioner sent to examine the state of the classrooms at the Policlinico. At the beginning of last summer it seems the Government departments (Public Works and Education) had promised that the institution would by November be practically available for the students of medicine, but it was not till September that the architects and engineers had tabled their instructions and not till October that these were placed in the workmen's hands. And so the winter session opened with many of the lecture rooms scarcely beyond the stage of "bare walls," the gas- and water-supply not laid on, the pavement or flooring still "in the rough," the heating apparatus not yet *in situ*, and the electric lighting not provided. Such operations as the *Tribuna's* reporter saw were being carried out by a quite inadequate number of hands, the majority being mere boys; add to this the shortness of the winter's day and the impossibility of working after sunset for want of gas light or electric light and some notion will be formed of the chaos at the Policlinico. A sum of 21,000,000 lire (£840,000) has already been sunk in the building—a triumph of medico-educational architecture so far as Baccelli's design and Podesti's interpretation of it go, but successive Governments have allowed the internal equipment to "stand over" for want of funds—700,000 lire being the minimum cost for this. "Meanwhile," as the *Tribuna* puts it, "the scholastic year is advanced, the chief clinical institution of the capital of Italy is not in working order, and an entire scholastic population has to suspend the studies for which it has already paid handsome fees." In retrieving a situation so disastrous to the public welfare, so discreditable to Italy as a great European power (continues the *Tribuna*), no longer delay can be tolerated.

Dec. 3rd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Tuberculous Disease of the Testis.

AT a recent meeting of the Vienna Clinical Society the comparatively new method of passive hyperæmia, introduced by Professor Bier, formed the subject of a number of communications. Dr. Ullmann described three cases of tuberculous disease of the testes. The first of these patients was an emaciated man, 55 years of age, who was suffering from pulmonary tuberculosis and sought advice on account of a swelling of the left testicle. A sinus led into it and the patient was greatly troubled with cystitis attended with fœtor. Dr. Ullmann adopted Professor Bier's method by placing an elastic band across the penis and scrotum, as high up as possible, and exerting compression until the genital organs appeared cyanosed, after which the elastic pressure was a little relaxed. The band remained *in situ* at first for half an hour and then for an hour. Within the three weeks during which the patient was under observation he gained five pounds in weight and the discharge and pain had almost disappeared. The infiltration, which was proved by the films to be tuberculous, was greatly diminished. The second patient had been suffering for one and a half years from swelling of the right testicle and purulent cystitis and no improvement had taken place under the usual palliative treatment. Since the adoption of the method of hyperæmia the infiltration had disappeared so far that no difference in size could now be detected between the two testicles. The third patient was a man, 28 years old, who without any apparent cause was seized with intense pain in the spermatic cord. No gonorrhœa or other infectious disease of the genital organs was present. The apex of the left lung was found to be infiltrated and the diagnosis of tuberculous disease of the testis which was then made was subsequently confirmed by the examination of the discharge when a sinus opened on the posterior aspect of the testicle. Here, also, Dr. Ullmann by the employment of Bier's method succeeded in checking the discharge, closing the fistula, and diminishing the size of the infiltrated testicle. If a patient will not consent to the treatment on account of the unsightly appearance of a cyanosed penis or scrotum, hyperæmia may be induced by hot air, which must be applied to a large area of the skin, such as that of the lower part of the abdomen and the upper parts of the thighs, so as to insure a sufficiently rapid current in the blood stream.

A Remarkable Punctured Wound.

At the same meeting of the Vienna Clinical Society Dr. Hain showed a man, aged 22 years, who, when under the influence of drink, attempted to commit suicide by stabbing himself in the abdomen with a large butcher's knife which entered the right hypochondrium. He was taken at once to a hospital where he arrived in a semi collapsed state, with arrhythmic pulse and vomiting blood-stained matter. The wound in the skin was about an inch long and was situated one and a half inches to the right of the median line. There was no free liquid in the abdomen. On the abdomen being opened in the middle line the wound was found to extend from the right side across the middle line to the left side and its internal opening was closed by the omentum. The knife had incised the wall of the stomach to the extent of about three-quarters of an inch, but the opening was closed by a clot of blood. After clearing out the contents, which consisted of about half a pint of blood, a double catgut suture was employed to secure the opening. The wound in the abdominal wall was closed in the usual manner and a gauze drain was inserted. The patient recovered rapidly. The case is remarkable on account of the oblique direction of the puncture which had entered on the right side but had wounded an organ on the left side.

Traumatic Porencephaly.

At another meeting of the same society Dr. Rauji showed a rare specimen of a brain which, as a result of a fall, had lost a considerable portion of its substance. The patient was a man who was 20 years old when he first came under observation. At the age of six years he fell from the roof of a house and was said to have been unconscious for a full week. Eight years later attacks of epilepsy set in, occurring usually every week, and this condition lasted for about three years. Then an improvement followed without any treatment whatever having been undertaken and lasted until about a year ago. The man at this time began to suffer intensely from a renewal of the epileptic fits which occurred as often as three or four times a day. They were of short duration—only two or three minutes—and were of a clonic character combined with unconsciousness. The patient was brought to the hospital and chloroform was administered. There was an aperture of the size of a shilling in the parietal bone of the right side and through this the pulsation of the brain (as was supposed) was apparent to the eye, but when the cranial cavity was opened, after dividing a fibrous membrane, a large cavity filled with clear serous fluid was exposed. There was a direct communication from this cavity to the cornu Ammonis and to the lateral ventricle, and the choroid plexus was visible in the deeper portion of it. The liquid was mopped out and the cavity was filled with iodoform gauze. Next day there appeared symptoms of meningitis, such as high temperature, rigors, and spasms; the dressings of the wound were changed but nothing unusual was found. The patient died suddenly and the necropsy revealed no signs of meningitis but only an extensive œdema of the brain substance, which was probably the cause of death.

Death of a Diver from Air Embolism.

One of the divers serving in the Austrian Fleet met with his death recently in circumstances which are of great interest from a medical point of view. A diver works in a rectangular chamber, open at the bottom, into which air is pumped at a sufficient pressure to exclude the water and to allow the man to work as on dry land. To counteract the difference of pressure between that of the atmosphere at the sea-level and that within the chamber the diver has to pass through three compartments or air-locks in which the air is at a pressure of one, two, and three or more atmospheres respectively, and in each of which he has to remain for some time until the system has adapted itself to the change of pressure. It seems that for some unknown reason the man in question when leaving work passed directly from the air at high pressure to that at normal pressure and was dead when found. The necropsy revealed embolism of air in the capillaries of the lungs. No doubt when the diver left his working place his lungs were filled with air at high pressure and some of the alveoli must have burst on coming suddenly under low pressure, allowing the air to enter the arterial and venous system. A similar case has been noticed by Mager and Schlesinger in their researches on "caisson disease," in which similar conditions present themselves. They were able to attribute a sudden death happening in a caisson to the same reason and corroborated their diagnosis by a necropsy. It may be added that emphysema of the lungs, which might be expected to occur in men who had for a long time been employed as divers, is very rare amongst them. The strain on the elasticity of the lung tissues is not so great as is supposed and, moreover, the ribs and their cartilages seem to bear the bulk of it.

Dec. 2nd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Inter-State Reciprocity.

THE matter of the transfer of their licenses to practise when members of the medical profession remove from one State to another is one that has always given rise to much difference of opinion. At present every medical practitioner must be licensed by the examining board of the State in which he practises but the standards vary greatly in different parts of the country. The boards of some States issue licenses without re-examination upon the presentation of credentials from certain other States whose standards are sufficiently high, whereas some States require the applicant to pass the examinations in nearly or quite all instances. Thus hardship and inconvenience are often caused to those who are compelled to change their residence, especially to elderly practitioners who, having received their professional training at a period when medical education in this country was less advanced than it now is, are deficient in the accomplishments which enable the less experienced but more highly trained recent graduates to shine at examinations. While there is little hope that a general equalisation of standards permitting of universal medical reciprocity will be accomplished in the near future, more and more States are entering into friendly relations of this sort with their neighbours. At a recent conference held between the Board of Regents of New York and the State Board of Medical Examiners of New Jersey an agreement was made providing for the mutual recognition of the credentials of the examined licentiates of each board, beginning Jan. 1st, 1906. New Jersey will endorse the medical license issued by any State, after examination, whose educational, examining, and licensing requirements are substantially equal to, or higher than, those of New Jersey, irrespectively of reciprocity, provided the applicant complies with the conditions of endorsement. The standard of requirements of New Jersey consists of a high school diploma issued after four years of study and a medical diploma issued after four courses of lectures of at least seven months each, in four different calendar years, in a medical college of approved standing. The medical licence of the State of New Jersey is endorsed at this time in lieu of further examination by the States of Maine, Vermont, Delaware, Virginia, South Carolina, Texas, Ohio, Illinois, Michigan, Minnesota, Wisconsin, Kansas, and Colorado.

A New Journal.

Under the title of the *Journal of Biological Chemistry* a new publication has appeared which is to be devoted to subjects relating to the modern developments of physiological chemistry. Dr. J. J. Abel of Baltimore and Dr. C. A. Herter of New York are the joint editors of what promises to be a periodical of the highest quality.

Medical Building for Chicago.

At a recent meeting of the Chicago Physicians' Club plans were discussed relative to the erection of a building which shall serve as a "permanent medical home and library for the physicians of Chicago and Cook County." The project is intended in some measure to duplicate the Academy of Medicine of New York and it is proposed to make the building self-supporting by providing a number of offices to be rented to physicians and surgeons. At the same time accommodation is to be supplied for the valuable and extensive library of the Chicago Medical Society, lecture and meeting rooms, club features, and rooms equipped for the care of emergency cases and minor surgical operations. The members of the various local medical associations have given the project their approval and have promised the necessary financial support.

New Hospitals.

In Philadelphia the Philanthropin Hospital recently chartered by the State Board of Charities was dedicated on Oct. 29th. The present building is only temporary but the permanent structure is soon to be erected.—A seven-storey addition to St. Vincent's Hospital in New York city was opened on Nov. 1st and contains new beds for 100 patients. The hospital now has 425 beds as against 30 in 1849 and 22,695 patients were treated last year, over 3000 of the number being charity patients.—The corner stone of the new building of the Manhattan Eye, Ear, and Throat Hospital was laid on Nov. 1st. The building is to be nine storeys high and will cover an extensive plot of ground on the Upper East Side. It is expected that it will be ready for occupation in about a year.

Antivivisection.

Although investigators in this country are not hampered quite as much by the well-meaning but ill-advised antivivisectionists as is the case in Great Britain sporadic outbreaks of the usual sort against animal experimentation are not lacking. Lately some newspapers have printed articles denouncing a "vivisection class" attended by young women, students in the University of Chicago. A petition is now being circulated through the State of Massachusetts to secure signatures in favour of a Bill shortly

to be brought before the legislature. This is intended "to prohibit all experiments under any circumstances and for any purpose whatever, with or without an anæsthetic, upon dogs or cats," and its promoters are very numerous.

A Pan-American Quarantine System.

The International Sanitary Convention held in Washington, D.C., in October was very successful and a great step was taken toward securing a uniform system of quarantine and preventive measures on the American continent. Nearly every South American Republic, as well as the West Indies, was represented by delegates. The 49 articles of the Paris Convention of Dec. 3rd, 1903, were accepted with a few modifications appropriate to the conditions, and when these have been ratified by the respective Governments the possibility of the recurrence of great epidemics such as have occurred in the past will be reduced to a minimum.

Curious Remedies.

Although musk and castoreum are still occasionally used by some practitioners the modern materia medica has been pretty well purged of all relics of the ancient school of treatment, which the Germans expressively term "Dreckapotheke," but from the rural districts curious instances of the survival of old therapeutic traditions still occasionally crop up. From a village in Pennsylvania comes an account of the cure of a young woman, apparently in the last stages of pulmonary tuberculosis, by swallowing the still pulsating hearts of two freshly killed rattlesnakes. Several near and remote ancestors of the patient are said to have been saved from death by the same treatment. Another instance of popular superstition is recorded from California. The father of an infant who was dying from meningitis refused to permit a medical practitioner to be called until forced to do so by the police. The infant was found wrapped in cats' skins which were applied by the parents because they were supposed to benefit the child through their electricity. The feline population of the little town had been almost extinguished by the father in his efforts to procure fresh stores of the life-giving force and over 50 pelts were discovered in the house.

The Kinematograph in Medicine.

The kinematograph has already found various applications in connexion with medical subjects, particularly for the representation of surgical operations. An important series of negatives has recently been obtained at the Craig Colony for Epileptics at Sonyea, New York, by Dr. W. P. Spratling, the superintendent of the colony, and Dr. W. G. Chase of Boston. Pictures were made of large numbers of epileptic seizures from start to finish, and it is said that the results are so perfect that when projected on the screen all the details of a seizure, such as the rate of respiration and movements of the eyeball, may be clearly perceived. Other nervous affections, such as the peculiarities of gait typical of certain diseases, have also been recorded. The pictures are to be exhibited at the coming meeting of the National Association for the Study of Epilepsy, to be held in New York on Nov. 29th.

An Action against the New York City Health Department.

The health department of the city of New York is the defendant in a suit to recover $50,000 damages, brought by the father of a little girl who met her death, as the complaint alleges, through the negligence of one of the department's physicians. The child's sister was ill with diphtheria and was therefore visited by one of the physicians of the health department. He gave the patient an injection of antitoxin and in accordance with the regulations for such cases administered a prophylactic injection of antitoxin to the other members of the family who had been exposed to the infection. The little girl in question, who was not ill and objected vigorously to the proposed procedure, immediately after the injection complained of terrible pains and burning sensations and died in convulsions within 15 minutes. It is said that this is the first case of this kind ever brought before the courts of New York.

Honours for Medical Men.

On Nov. 15th a large number of the friends of Dr. John C. Hemmeter of Baltimore, well known as an authority on gastro-intestinal diseases, assembled to take part in the presentation of his portrait which was a gift to him from 95 of his professional friends in this country and Europe in commemoration of the twentieth anniversary of his doctorate. Surgeon-General Walter Wyman of the United States Marine Hospital Corps made the presentation.—In similar circumstances a testimonial banquet was given to Dr. Nicholas Senn of Chicago, at the Auditorium Hotel, Chicago, on Nov. 11th. About 700 guests were present, including representatives from 20 States. Speeches were made by Dr. J. D. Bryant of New York, Dr. L. G. Nolte of Milwaukee, Dr. W. J. Mayo of Rochester, Minnesota, Dr. Lewis S. McMurtry of Louisville, Kentucky, Dr. Charles A. L. Reed of Cincinnati, Ohio, Dr. Senn himself, and others. Dr. Senn was presented with a gold medallion bearing his portrait, the gift of his friends, and with a silver loving cup given by his former private pupils. An association to be devoted to scientific research has been formed in Chicago with the name of "The Nicholas Senn Club."

Nov. 24th.

Medical News.

UNIVERSITY OF OXFORD.—The following have passed Part I. of the examination in Preventive Medicine and Public Health:

A. H. Hogarth, P. K. Muspratt, and J. P. Tildesley.

The following have passed in Parts I. and II. and are entitled to receive the Diploma in Public Health:

J. F. Beale, W. Cahill, L. B. Scott, D. J. Thomas, and R. P. Williams.

UNIVERSITY OF CAMBRIDGE.—Mr. C. T. R. Wilson, F.R.S., has been appointed University Lecturer in Experimental Physics and Mr. A. C. Seward, F.R.S., Chairman of the Examiners for the Natural Sciences Tripos.—The Medical School Buildings Syndicate reports donations of £252 10*s.* for the provision of show-cases in the Humphry Museum and asks the Senate for an additional grant of about £700 for the further equipment of the museum and laboratories.—Dr. H. K. Anderson, Dr. G. S. Graham-Smith, and Dr. G. H. F. Nuttall have been appointed members of the State Medicine Syndicate.—Dr. W. M. Fletcher has been reappointed a member of the Special Board for Medicine.—Dr. D. MacAlister has been reappointed a member of the Appointments Board.—At a congregation on Nov. 23rd C. E. A. Armitage, Emmanuel College, was admitted to the degree of Bachelor of Surgery.—W. L. H. Duckworth, M.D., M.A., of Jesus College, has been approved for the degree of Doctor of Science.—The Walsingham medal in biology has been awarded to Mr. W. S. Perrin of Caius for his researches on the protozoa.—At a congregation on Dec. 2nd the following degrees were conferred:—

M.B.—W. G. Howarth, King's; P. W. Leathart, Clare; S. H. Clarke, Caius; G. Holroyd, Christ's; and R. O. Lee, Emmanuel.
B.C.—P. W. Leathart, S. H. Clarke, and G. Holroyd

UNIVERSITY OF BIRMINGHAM: FACULTY OF MEDICINE.—At the recent final examination for the degrees of M.B., Ch.B., for ordinary candidates the following were successful:—

R. W. Aitken, W. D. Carruthers, F. T. H. Davies, Helen G. Stewart, and S. G. Walker.

TRINITY COLLEGE, DUBLIN.—At the final examination in Surgery in Michaelmas term the following were successful:

Howard English, John W. Burns, Benjamin Johnson, Daniel M. Corbett, William I. Thompson, George E. Nesbitt, Thomas King-Edwards, John Chambré, William C. MacFetridge, Thomas T. H. Robinson, William R. Galwey, James M. Harold, Carlile Kelly, Alfred C. Elliott, Cyril H. M'Comas, Henry H. White, and Edward D. Atwell.

—At the final examination in Midwifery the following were successful:—

Samuel G. S. Haughton, Thomas H. Peyton, John C. P. Beatty, Basil G. Brooke, Montgomery D. Ferguson, Percy B. Egan, Richard A. Connell, John D. Sands, Francis R. Coppinger, Daniel M. Corbett, Hercules J. Knox, James M. Harold, Edward D. Atwell, William I. Thompson, Herbert J. Wright, Cyril H. M'Comas, and George S. Walton.

FOREIGN UNIVERSITY INTELLIGENCE—*Amsterdam:* Dr. H. Timmer has been recognised as *privat-docent* of Orthopædics.—*Athens:* Dr. Liviernatos of Geneva

has been appointed to the chair of General Pathology.—*Berlin:* Dr. A. Kuttner, who has become editor of the *Zeitschrift für Tuberculose*, has been granted the title of Professor.—*Greifswald:* Dr. Sauerbruch has been recognised as *privat-docent* of Surgery and Dr. Siegfried Weber as *privat-docent* of Medicine.—*Heidelberg:* Professor Vincenz Czerny, being about to confine himself to the work of the Cancer Institute, is relinquishing charge of the University Surgical Clinic which will probably be taken up by Dr. Karl Garré of Breslau.—*Jena:* Dr. Röpke has been recognised as *privat-docent* of Surgery.—*Kazan:* Dr. V. Rojansky has been recognised as *privat-docent* of Internal Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Barabin, professor of pathological anatomy in Nancy.—Dr. Dewalque, professor of chemistry in the Faculty of Applied Sciences in the University of Liége, at the age of 79 years.—Dr. Leopold Brühl, who was for many years a member of the Imperial German Sanitary Department and an eminent authority on vital statistics, at the age of 70 years.—Dr. J. Magranez, professor of internal pathology in the Medical School of Valencia.—Dr. C. Seiler, formerly professor of diseases of the ear and throat in the Pennsylvania University, Philadelphia.

SLEEPING SICKNESS IN UGANDA.—In the report of Lieutenant-Colonel J. Hayes Sadler, C.B., the British Commissioner, on the affairs of the Uganda Protectorate for the year ending March 31st last, the following reference is made to sleeping sickness:—"In my reports for the last two years I gave full accounts of the appearance and spread of this dread epidemic in the Protectorate and discussed the question as to whether any remedial measures were possible. The conclusions arrived at were not hopeful; no remedy has been found, and such measures as segregation and attempting to confine the population of the affected and non-affected districts within their areas were not found to be practicable. The disease continued unabated during the year in the Lake regions of Uganda and Busoga. During the latter portion of the year it made its appearance in an endemic form in the Nile Province. Captain Greig, a member of the Royal Society's Sleeping Sickness Commission, proceeded to the Nile Province on his way home to investigate the conditions of the disease in that province, and prepared a report on his arrival in England. Towards the close of the year Dr. Hodges, the medical officer at Nimule, who had taken great interest in the investigation of the disease in its earlier stages in Busoga, made further inquiries and reported that the tsetse fly is found in much smaller areas in North Ungoro and the Nile than was at first imagined, and in his report he expresses the opinion that no epidemic of such magnitude as has been experienced on Lake Victoria is to be apprehended, the conditions for a widespread epidemic being absent. Nevertheless the presence of the disease on the banks of the Nile is a matter of most serious concern to the Soudan and Egypt. With the exception of the Nile Province, sleeping sickness appears to have confined itself to the Lake regions, a belt about ten miles in depth round the Victoria Nyanza, where it first appeared, and here and on the adjacent islands the mortality has been appalling, over 100,000 of the people in these districts having been carried off within the last four years. In Uganda opinions are divided as to whether the disease is now abating; in Busoga the chiefs are of opinion that, allowing for the decrease of population due to sleeping sickness, the ravages of the epidemic are on the decrease. It is now spreading slowly to the south along the lake to German East Africa. A few months ago it was understood that though the fly was present in German East Africa sleeping sickness had not yet appeared. On July 20th, 1905, it was reported to me by a German official from Bukoba that there were 54 cases of infection in that station and that the islands to the south of Bukoba were now all infected. Latterly it has begun to attack Europeans. For the last three years the medical officers attached to the Royal Society's Commission have been labouring incessantly at the investigation of sleeping sickness; its causes have been ascertained and a great deal of work on the scientific study of the disease has been done, but neither here nor in the Congo, where the disease has been under investigation for years, has any remedy yet been discovered. A scheme for extended investigation into sleeping sickness is now under consideration and details for working the scheme have been submitted."

SOCIETY OF ARTS.—At an ordinary meeting of the Society of Arts, held on Nov. 29th, Sir William Preece read a paper entitled "The British Association in South Africa." He took part in the visit of the Association to South Africa in August and now described some of the events which had come under his observation during the extensive journeys which the members of the Association made throughout the country from Cape Town to Johannesburg, Pretoria, and Durban.

PRESENTATION TO A MEDICAL PRACTITIONER.—At the Bristol Royal Infirmary on Nov. 24th Mr. E. Hugh Edwards Stack, M.B., B.C. Cantab., F.R.C.S. Eng., L.R.C.P. Lond., who has been connected with the resident staff of that institution for the last eight years, was presented with a roll-top desk and chair by past and present students as a mark of respect and esteem on the occasion of his resigning the appointment of house surgeoncy of the infirmary.

THE MIDDLESEX HOSPITAL.—Lord Sandhurst presided at the quarterly general court of governors of the Middlesex Hospital held on Nov. 30th in the board room at the hospital. The report of the weekly board stated that Mr. Henry Morris, the senior surgeon, had notified his intention of retiring from office at the end of the year. Mr. Morris had rendered valuable services to the hospital and had generously contributed £1000 towards the establishment of a permanent endowment fund for the maintenance of the medical school. The King had forwarded his annual subscription of £100 towards the funds of the hospital. Since March 31st, during the four months the hospital was open, 1297 in-patients were treated, and in the out-patient department 14,851 cases were treated, with a total attendance of 37,428. As a result of the special meeting held on June 30th the sum authorised by the governors to be allocated from the funds to enable the medical school to be carried on already exceeded £2000. The report was adopted and Mr. Morris was elected a consulting surgeon to the hospital. At the conclusion of the court Lord Sandhurst, on behalf of the medical staff and governors and the nursing staff, made presentations of plate and jewelry to Miss G. M. Thorold upon her retirement from the post of lady superintendent after 35 years' service.

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held on Nov. 30th, at 6, Suffolk-street, Pall Mall, Dr. F. H. Champneys being in the chair. The following charges alleged against Mary Ann Coit, a certified midwife, were heard:—That being in attendance on a confinement on August 16th, 1905, and subsequent days, she was guilty of negligence in the following respects: that she disobeyed Rule E 11, which makes her responsible for the cleanliness and comfort of the patient during the lying-in period, by neglecting to wash the patient for a period of 19 hours after the birth of the child; that she disobeyed Rule E 2 by not taking to the confinement the appliances thereby required, and in particular a clinical thermometer; and that she disobeyed Rules E 17 and 19 (b) by failing to notify to the local supervising authority within 12 hours the fact of medical assistance having been sent for and the reason of the necessity thereof. In this case the Board ordered the removal of the name of the midwife from the roll. The following charges alleged against Elizabeth Fetch, a certified midwife, were then heard:—That being in attendance on a confinement on August 23rd, 1905, and subsequent days, she was guilty of negligence in the following respects: that she disobeyed Rule E 11 by neglecting to visit the patient after August 27th until sent for by the husband on the 31st; that she disobeyed Rule E 17 by not declining to attend alone and advising that a registered medical practitioner should be sent for in a case of illness of the patient: that she disobeyed Rule E 2 by not taking to the confinement the appliances thereby required, and in particular a clinical thermometer; and that she habitually disobeyed Rule E 19 (a) by not keeping a register of cases in the proper form. In this case the Board decided that the midwife was to be censured. The following charges alleged against Annie Broomhead, a certified midwife, were then heard:—That being in attendance at a confinement on July 8th, 1905, and subsequent days, she was guilty of negligence and misconduct in the following respects: that she disobeyed Rule E 6 by leaving the patient after the commencement

of the second stage of labour, and that she disobeyed Rule E 17 (b) by not declining to attend alone and advising that a registered medical practitioner should be sent for in a case of an arm presentation. In this case the decision of the Board was that the midwife was to be warned to be more careful in the future.

DONATIONS AND BEQUESTS.—The trustees of the late Mr. Henry Bloom Noble of Douglas, who left a large part of his estate for charitable purposes, announce the following gifts:—£20,000 for building a new hospital in Douglas; £1500 for repairing the present hospital, Douglas; £10,400 for maintaining five district nurses in the Isle of Man; £2500 for maintaining a bed in the Liverpool Royal Infirmary; and £6000 for a cottage hospital at Ramsey.

PUBLIC HEALTH IN CYPRUS.—Reporting on the affairs of this colony for the year 1904–05 the High Commissioner, Sir C. A. King-Harman, quotes the testimony of the chief medical officer that the general health of the island has been on the whole very satisfactory. An outbreak of smallpox in the Famagusta district, which was promptly and successfully suppressed, a few sporadic cases of typhoid fever, and conspicuously rare cases of diphtheria were the only instances of infectious or contagious disease. The number of inmates in the leper farm at the end of the year was 109. Stringent measures are enforced for the compulsory segregation of lepers in the farm and the gradual decrease in the number of cases indicates that the disease in the island is diminishing. While the leper farm is an admirable institution, well managed and well administered, the lunatic asylum in Nicosia is, on the other hand, far from satisfactory and the erection of a more suitable building without the walls of the town is a pressing necessity. Excellent and most useful work has been done during the year by the Government Analytical and Bacteriological Laboratory, a well-equipped institution, the advantages of which are being pressed on the attention of the agricultural community. Besides the great assistance rendered to the medical profession and also to the police in criminal investigations, the laboratory has furnished analyses of water, soils, fertilisers, wine, minerals, &c., which have been most useful and beneficial.

THE PRINCESS CHRISTIAN COTTAGE HOSPITAL, SIERRA LEONE.—This is the first mission hospital on the West Coast of Africa and was opened in June, 1892, for the purpose of training African ladies in nursing and ministering to the bodily and spiritual needs of the sick poor. The work was commenced by Mrs. Ingham and continues as a diocesan institution under the Bishop of Sierra Leone. The consulting medical officers are Dr. W. T. Prout, C.M.G., and Dr. W. Renner. The staff consists of a European resident medical officer, matron, and two sisters, under whom there are four or five African nurses. The London office of the Sierra Leone Diocesan Association is at the Church House, Westminster, S.W. The hospital premises include one large free ward for women and children, one small ward for paying patients, and a ward for European missionaries, together with an operating room, a dispensary, and rooms for the full accommodation of the staff. The report of the medical work for the year 1904 is compiled by Dr. Sidney G. Peill, the resident medical officer. He states that there were 9383 attendances of out-patients and that 238 in-patients were treated. Among the operations there were 76 which required the administration of chloroform. Acute pneumonia is the most fatal disease in the colony and is epidemic during the harmattan season when the air is very dusty; among the in-patients there were 16 cases of this disease, with five deaths. The secretary's report mentions regretfully that the hospital would shortly lose the valuable services of Dr. Peill and Miss Rhodes (the matron), who were about to be married and would then proceed to China.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, W.C.

Practical Sanitary Science. A Handbook for the Public Health Laboratory. By David Sommerville, B.A., M.D., D.P.H. Cantab., M.R.C.P. Lond., Lecturer in Public Health, King's College, London. Price 10s. 6d. net.

DALE, REYNOLDS, AND CO., LIMITED, *First Aid* Offices, 46, Cannon-street, E.C.

On Active Service with the St. John Ambulance Brigade (South African War, 1899–1902). By the late William S. Inder, S.J.A.B., Kendal Division, Westmoriand. Price 5s.

FROWDE, HENRY, Oxford, London, Edinburgh, and Glasgow.

Counsels and Ideals. From the Writings of William Osler. By C. N. B. Camac. Price 4s. net.

HODDER AND STOUGHTON, 27, Paternoster-row, E.C.

The Medical Epitome Series. Series edited by V. C. Pedersen, A.M., M.D. 16 volumes. Price 4s. each, net.
Anatomy. By Henry E. Hale, A.M., M.D.
Clinical Diagnosis and Urinalysis. By James Rae Arneill, A.B., M.D.
Diseases of the Eye and Ear. By Arthur N. Alling, M.D., and Ovidus Arthur Griffin, B.S., M.D.
Diseases of the Skin. By Alfred Schalek, M.D.
Genito Urinary and Venereal Diseases. By Louis E. Schmidt, M.Sc., M.D.
Medical Diagnosis. By Austin W. Hollis, M.D.
Microscopy and Bacteriology. By P. E. Archinard, A.M., M.D.
Nervous and Mental Diseases. By Joseph Darwin Nagel, M.D.
Normal Histology. By John R. Wathen, A.B., M.D.
Obstetrics. By W. P. Manton, M.D.
Organic and Physiologic Chemistry. By Alexius McGlannan, M.D.
Pediatrics. By Henry Enos Tuley, A.B., M.D.
Physics and Inorganic Chemistry. By Alexius McGlannan, M.D.
Physiology. By Theodore C. Guenther, M.D., and Augustus E. Guenther, B.S.
Surgery. By M. D'Arcy Magee, A.M., M.D., and Wallace Johnson, Ph.D., M.D.
Toxicology. By Edwin Welles Dwight, M.D.

JACK, T. C. AND E. C.

Psychology. By C. W. Saleeby, M.D., author of "The Cycle of Life," &c. Price 1s.
Sociology. By C. W. Saleeby, M.D. Price 1s.

JACQUES, G., 14, Rue Hautefeuille, Paris.

Les Taches de Koplik: leur Importance pour le Diagnostic et la Prophylaxie de la Rougeole. Par André Bing, Docteur en Médecine, Licencié-ès-Sciences. Price not stated.

JOHN BALE, SONS, AND DANIELSSON, LIMITED, 83–91, Great Titchfield-street, Oxford-street, W.

The Changes Produced by Inflammation in the Conjunctiva. (Hunterian Lectures, R.C.S., 1905.) By M. S. Mayou, F.R.C.S., Jacksonian Prizeman and Hunterian Professor, Royal College of Surgeons, Eng. Price 10s. 6d. net.
The Diagnosis of Tuberculosis of the Lung, with Special References to the Early Stages. By Dr. K. Turban, Privy Councillor of the Grand Duchy of Baden, Director of the Sanatorium at Davos. With an Introduction by Sir Dyce Duckworth, M.D., LL.D., F.R.C.P. Translated by Egbert C. Morland, M.B., B.Sc. Lond. Price 5s. net.
The Animal Parasites of Man. A Handbook for Students and Medical Men. By Dr. Max Braun, Professor of Zoology and Comparative Anatomy, and Director of the Zoological Museum of the University of Königsberg, Prussia. Third enlarged and improved edition. Translated from the German by Pauline Falcke. Brought up to date by Louis W. Sambon, M.D. (Naples), Lecturer at the London School of Tropical Medicine, and Fred. V. Theobald, M.A., Vice-Principal and Economic Zoologist to the South-Eastern Agricultural College. Price 21s. net.

LEHMANN, J. F., Münich.

Die Entstehungsursachen der Gelsenkirchener Typhusepidemie von 1901. Auf Grund der für die Verhandlungen des Gelsenkirchener Prozesses erstatteten Sachverständigen-Gutachten dargestellt von Dr. Rudolf Emmerich, Professor an der Universität München und Dr. Friedrich Wolter, prakt. Arzt in Hamburg. Mit einer Doppelkarte und zahlreichen Illustrationen, Kurven, usw. (Jubiläumsschrift zum 50 jährigen Gedenken der Begründung der Lokalistischen Lehre Max von Pettenkoffer's. I. Band.) Price not stated.

LEWIS, H. K., 136, Gower-street, W.C.

Landmarks and Surface Markings of the Human Body. By Louis Bathe Rawling, M.B., B.C. Cantab., F.R.C.S. Eng., Assistant-Surgeon, Senior Demonstrator of Anatomy and Demonstrator of Practical Surgery at St. Bartholomew's Hospital. Second edition. Price 5s. net.

LONGMANS, GREEN, AND CO., London.

Transactions of the Clinical Society of London. Volume the thirty eighth. Price not stated.

PENTLAND, YOUNG J., Edinburgh and London.

The Principles of Treatment and their Applications in Practical Medicine. By J. Mitchell Bruce, M.A., LL.D., M.D., F.R.C.P., Consulting Physician to the Charing Cross Hospital and to the Hospital for Consumption, Brompton. Third impression. Price not stated.

SIMPKIN, MARSHALL, HAMILTON, KENT AND CO., Limited, London.

Lunacy Practice: A Practical Guide for the Certification and Detention of Persons of Unsound Mind. By William H. Gattie, F.C.I.S., Secretary to Peckham House Asylum, London, S.E., and to Northumberland House Asylum, Finsbury Park, London, N. Price 2s. 6d. net.

WILSON, EFFINGHAM, 54, Threadneedle-street, E.C.; W. AND R. HOLMES, 11, Duni p-street, Glasgow.

Bookkeeping Down to Date. By Andrew Munro. Third Place Bookkeeping, Society of Arts, 1904 (4894 competitors). Second Place Advanced Bookkeeping, Society of Arts, 1905 (1869 competitors). Second edition. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AMY, ARCHIBALD CRAIG, M.B., Ch.B. Glasg., has been appointed Resident House Physician at the Queen's Jubilee Hospital, London, S.W.

ATKINS, F. D., M.R.C.S., L.R.C.P. Lond., has been appointed to the Ear Department at St. Thomas's Hospital.

BLETSOE, J. H., M.B., B.S. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

BULLEY, F. M., M.R.C.S., L.R.C.P., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

COLERIDGE, ALFRED, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Bristol Dispensary.

COLES, C. ST. A., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

COTTON, R. H., M.R.C.S., L.R.C.P. Lond., has been appointed to the Throat Department at St. Thomas's Hospital.

COUTTS, D. K., M.B., B.S. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

COX, FRANKLIN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Radstock District by the Clutton (Somerset) Board of Guardians.

DREW, J. H., M.B., B.S. Lond., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

EYRE, C. R. B., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Ophthalmic House Surgeon at St. Thomas's Hospital.

FALK, H., M.B., B.C., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

FOOTNER, G. R., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Junior Casualty Officer to St. Thomas's Hospital.

GRAY, H. T., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

HEWETT, F. S., M.R.C.S., L.R.C.P., has been appointed to the Throat Department at St. Thomas's Hospital.

HOOKER, A. W., M.B., B.S. Lond., has been appointed House Surgeon to Out-patients at St. Thomas's Hospital.

HOWITT, A. B., M.R.C.S., L.R.C.P. Lond., has been appointed to the Skin Department at St. Thomas's Hospital.

JEWESBURY, R. C., M.R.C.S., L.R.C.P., has been appointed House Physician to Out-patients at St. Thomas's Hospital.

KISCH, H. A., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Casualty Officer to St. Thomas's Hospital.

LANGLEY, G. J., M.B., B.S. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

MEEK, W. O., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

MIALL, CHARLES L'OSTE, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Paulton District by the Clutton (Somerset) Board of Guardians.

MORGAN, C. L., M.B., B.S. Lond., has been appointed Resident House Physician at St. Thomas's Hospital.

NORBURY, L. E. C., M.B., B.S. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

PEARCE, GEORGE HARPER, D.P.H. Cantab., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health to the Darton Urban District Council.

POLLARD, GEORGE SAMUEL, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Midsomer Norton District by the Clutton (Somerset) Board of Guardians.

RICHARDSON, ARTHUR WILLIAM CECIL, M.B. Lond., has been appointed Medical Officer to the Bristol Dispensary.

RIMELL, ALFRED TOM, M.D. Durh., has been appointed Medical Officer and Public Vaccinator to the Third, Fourth, and Tenth Districts of the Tendring Union, Essex.

SIBBALD, DOUGLAS W., M.B., Ch.B. Edin., has been appointed Resident House Surgeon at the Queen's Jubilee Hospital, London, S.W.

SINGTON, H. S., M.R.C.S., L.R.C.P. Lond., has been appointed to the Ear Department at St. Thomas's Hospital.

STEPHENSON, SYDNEY, M.B., C.M., F.R.C.S. Edin., has been appointed Honorary Ophthalmic Surgeon to the Queen's Jubilee Hospital, London, S.W.

SUTHERLAND, DAVID, M.B., B.S. Edin., has been appointed Medical Officer to the Worksop Dispensary and Victoria Hospital.

THOMPSON, R. J. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon at St. Thomas's Hospital.

WALSH, LESLIE H., M.D., B.S. Durh., has been appointed Physician to Bellotts Mineral Water Hospital, Bath.

WARD, W. C. A., M.R.C.S., L.R.C.P. Lond., has been appointed to the Skin Department at St. Thomas's Hospital.

WHITTING, R. E., M.B., B.C. Cantab., has been appointed Junior Obstetric House Physician at St. Thomas's Hospital.

WRIGHT, F. R. E., M.B. Lond., has been appointed Senior Ophthalmic House Surgeon at St. Thomas's Hospital.

WYATT, J. M., M.B., B.S. Lond., has been appointed Senior Obstetric House Physician at St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE, War Office, S.W.—Forty Commissions in the Royal Army Medical Corps.

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

BOURNEMOUTH, ROYAL VICTORIA HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon. Salary £80, with board, lodging, and washing.

CAMBRIDGE, BOROUGH OF.—Medical Officer of Health. Salary £450 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £30, with board and residence. Also Assistant Surgeon. Also non-resident Casualty Medical Officer. Salary £200 per annum, with lunch.

LABORATORIES OF PATHOLOGY AND PUBLIC HEALTH, 62, Queen Anne-street, London, W.—Microscopist. Salary £150, rising to £300.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £25, with board and lodging.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury.—Visiting Surgeon. Honorarium £100 per annum.

MARGATE, ROYAL SEA BATHING HOSPITAL.—Honorary Assistant Visiting Surgeon.

MIDDLESEX HOSPITAL.—Medical Officer and Registrar to the Cancer Wing. Salary £100 per annum, with board and lodging.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Junior House Physician. Salary £50 per annum, with board and residence.

NORFOLK AND NORWICH HOSPITAL.—Second Assistant House Surgeon for six months. Honorarium £20, with board, lodging, and washing.

NORTHAMPTON GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 a year, with apartments, board, washing, and attendance.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician for six months. Salary at rate of £60 per annum, with board, residence, and laundry.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House Surgeon for six months, renewable. Salary £50, with board, residence, and washing.

ROYAL FREE HOSPITAL, Gray's Inn-road, W.C.—Assistant Anæsthetist and Clinical Assistants for six months.

SALFORD ROYAL HOSPITAL.—Senior House Surgeon, House Physician, and Junior House Surgeon, all for six months. Salaries at rate of £110, £100, and £90 respectively, with board and residence.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Four Assistant Physicians and Three Assistant Surgeons.

SIERRA LEONE, PRINCESS CHRISTIAN HOSPITAL, Freetown.—Medical Officer. Salary £250 a year, with rooms.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 per annum. Also Assistant House and Visiting Surgeon. Salary £80 per annum. Both with board, washing, and residence.

SUSSEX COUNTY HOSPITAL.—Second House Surgeon and Assistant Anæsthetist, unmarried. Salary £60 per annum, with board and residence.

TOTTENHAM HOSPITAL, London, N.—Honorary Surgical Registrar.

UNIVERSITY OF LONDON.—Professor of Protozoology. Salary £700 per annum.

WANDSWORTH UNION INFIRMARY, St. John's-hill, near Clapham Junction.—Junior Assistant Medical Officer, unmarried, for six months. Salary at rate of £100 a year, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Chudleigh, in the county of Devon; at Retford, in the county of Nottingham; at Wilmslow, in the county of Chester; and at Singleton, in the county of Sussex.

Births, Marriages, and Deaths.

BIRTHS.

BRAY.—On Nov. 14th, at Meerut, India, the wife of Major George Bray, R.A.M.C., of a daughter.

BOND.—On Dec. 4th, at The Square, Godalming, the wife of Bertram W. Bond, M.B., B.S., of a daughter.

MACFADDEN.—On Dec. 1st, at Latymer-road, Edmonton, N., the wife of A. W. J. MacFadden, M.B., C.M., of a daughter.

MARRIAGE.

BULLOCK—POOL.—On Nov. 30th, at Bloomsbury, William Carey, only son of W. R. Bullock of Dingwall-road, Croydon, to Marian Theresa Pool, M.B. Lond., second daughter of Edw. E. Pool, of Bedford-square, W.C.

DEATHS.

POWELL.—On Dec. 4th, at Norwood Lodge, Weybridge, John James Powell, L.R.C.P., M.R.C.S., L.S.A., in his 49th year.

STEWART.—On Nov. 16th, at Atnara, Southern Nigeria, J. F. Stewart, M.B., C.M. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE CARE OF THE FEEBLE-MINDED AND THE FUTURE OF THE RACE.

THE secretary of the Incorporated Lancashire and Cheshire Society for the Care of the Feeble-minded writes to us to inform us that although, as mentioned by our Manchester correspondent in his note on the society which appeared in his letter published in THE LANCET of Nov. 18th, the balance at the end of September was nearly £420, according to the accountant's statement, yet that this balance includes cows, pigs, and sheep which are not available as cash. The cash balance at the time of the meeting was £10 and this has now become an adverse balance of £100. The society therefore is much in want of funds. The secretary says that the society has a number of boys working on the farm who have reached the age of 16 years and accordingly no further grants are available for them. She adds: "We have the satisfaction of knowing that they are not unemployed, nor paupers, nor criminals; nor—which would be worse than all—fathers of families." We may mention in reference to this remark that we have received a communication from a correspondent founded upon a statement which he attributes to Professor Karl Pearson: "The one safeguard against the multiplication of the unfit lies in a selective death-rate. We have provided unlimited medical comforts and housing for the physically unfit and for the rogue." Our correspondent goes on to illustrate his argument by three hypothetical newspaper reports of the future. The first deals with a member of the Peculiar People who is charged with administering medicines with the wilful intent of prolonging the life of his child, he himself and the child belonging to "the unfit." The second describes how a celebrated surgeon was charged with prolonging the life of a patient suffering from appendicitis, not caused by accident, and the third deals with a publican who is summoned for not serving the Jane Cakebread of the time with drink when she was already drunk.

Of course the point raised by Professor Pearson and elaborated by our correspondent is not new and it is perfectly true to argue that the race would be far stronger physically, and possibly mentally, if the unfit were to be eliminated, either by allowing disease to run rampant or by the ancient custom of exposure of unhealthy infants. But civilisation, to say nothing of Christianity, has decreed that the weaklings should be preserved. And if every weakly child had been killed at birth, or allowed to die from disease without any care being expended upon it, how great would have been the loss to the world of art in general, and in a few cases at least, at any rate as concerns our own country, from an Imperial point of view. The name of Wolfe will occur to everyone, and Wellington was, when at Eton, "of a rather weakly constitution." That the diseased and the weak-minded should be prevented, as far as possible, from reproducing their like may be desirable, but at present it does not seem to be "within the bounds of practical politics."

GARBAGE.

AT Worship-street police court on Dec. 5th Messrs. Lipton, Limited, were summoned for having on their premises carcasses of pigs which were unsound and unfit for human food. The dealer who sold the pigs the carcasses of which were seized said that he paid top prices for them. Mr. Cluer is reported as saying that this was certainly a case where the employer must suffer for the fault of his servant, and he imposed the full penalty of £50 and 20 guineas costs.

A QUESTION OF PRECEDENCE.

To the Editors of THE LANCET.

SIRS,—I am more than half ashamed to air a grievance on the subject of dignity and I am pusillanimous to the degree of requesting to be veiled in the cloak of anonymity; for my grievance is against that august body, the Royal College of Physicians of London, and I stand in awe of their dread Censors who hold fate in each hand. Why should their Licentiate Diploma in official communications take pride of place over the Membership of the College of Surgeons?

Nearly a quarter of a century ago my heart swelled with wholesome pride that I had been able to achieve the honour of Membership of the College of Surgeons, but my pride was partly neutralised when it was necessary to couple with this honour the less glorious title of Licentiate and it has always been a sneaking grievance that the minor sounding permissive title of "Licentiate" should take precedence of "Member," which to the ordinary intelligence suggests a position of more responsibility and dignity. It is, of course, true that there are three grades of titles associated with the College of Physicians and it was convenient to give the lowest grade the title of Licentiate. In ancient days the physician was a great and important personage and the chirurgeon was a mere shedder of blood and setter of bones, a humble servant of the learned physician. In these days, however, there are men bold enough to claim some measure of equality for the surgeon and in a few more years who shall say that there will be any occupation for the poor physician, for most of the organs will be excised by the surgeon before he is called upon the scene. Under these circumstances, caused by increased knowledge and increased responsibility required by men practising surgery, is it not time that some change should take place in the relative position of the two great branches of the profession? As a small indication of this, might it not be possible for those who possess the two ordinary qualifications of M.R.C.S. Eng. and L.R.C.P. Lond. to have these titles expressed in the order of apparent relative importance? There may be others like myself who are specially associated with surgical work and for various reasons have not been able to take the Fellowship who would feel gratified if the surgical diploma could be placed first in official documents. This is, perhaps, not a very serious matter but it may be worthy of consideration. I am, Sirs, yours faithfully,

Nov. 27th, 1905. L.R.C.P. LOND., M.R.C.S. ENG.

THE LONDON TEMPERANCE HOSPITAL AND TEMPERANCE STATISTICS.

To the Editors of THE LANCET.

SIRS,—The "paucity of argument" which Dr. A. H. Copeman ascribes to my last letter is easily explained. One cannot argue against groundless vituperation, and I could only expose the disingenuous misrepresentations contained in Dr. Copeman's letter. I am sorry to observe that instead of apologising for his misconduct he repeats it in his latest communication, in which he represents the board and medical staff of the London Temperance Hospital as glorying in their superiority to the boards and medical staffs of other hospitals. They have done nothing of the kind, but have honestly endeavoured on one particular method of treatment to show a more excellent way than is commonly pursued. The charge involved in Dr. Copeman's statement is one always advanced against those who diverge from traditional routine. The few who are the pioneers of all reforms are invariably charged with pretending to be wiser than their predecessors.

Dr. Copeman evidently wishes to convey the impression that the board and medical staff of this hospital are banded together to carry out an idea at whatever cost to the patients. This is a monstrous caricature of the situation. The board have in all cases selected their medical officers on professional considerations, trusting to their honour to conform to the rules of the institution. Personal abstinence, though valued, is not made a condition of appointment and at the present time I am not aware that more than one member of our medical staff is a total abstainer.

Dr. Copeman concludes his letter by a question which is as reasonable, or unreasonable, as if we were to ask whether the medical staff of University College Hospital had ever administered alcohol to any patient when its use would have been beneficially dispensed with.

If Dr. Copeman is really desirous of obtaining correct information concerning the course of treatment pursued in the London Temperance Hospital he can procure it from any member of our visiting staff if he should propose his inquiries in the spirit and language of a gentleman. I am, Sirs, yours faithfully,

DAWSON BURNS,
Honorary Secretary, London Temperance Hospital.

Hampstead-road, N.W., Nov. 28th, 1905.

A POINT OF DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—I have received a letter requesting information from a former patient of mine who now lives in a remote part of California. She was a hospital nurse and therefore the details in the following statement can be trusted. She writes as follows: "My sister, aged 49 years, has a condition of the gums that is most serious and no one seems able to relieve her. She has worn false teeth for 15 years and lately has had gold plates to see whether they would be less irritating but with no better result. Small ulcers first form, then the gums become very red, a little swollen, very tense, and shiny looking, with tremendous inflammation and great pain. This condition will last about four or five days and then get better gradually. She cannot use her teeth for about a week. After some improvement in one night this dreadful condition appears again."

I should be grateful if any of your readers can suggest a diagnosis and treatment. Is the condition one allied to herpes or is it due to some parasitic inflammation? I am, Sirs, yours faithfully,

Dec. 4th, 1905. ETONENSIS.

"SCARLET FEVER" IN CHILDREN AFTER BURNS AND SCALDS.

AT the Hackney coroner's court on Dec. 2nd Dr. W. Wynn Westcott held an inquest upon the body of a little girl, aged two and a half years, who had died three days previously in the Eastern Fever Hospital at Homerton. It appeared that a fortnight before her death the child had been left alone in a room where an unguarded fire was burning; the mother, hearing screams, rushed to her aid and found that the velvet sleeve covering the child's left arm was ablaze; she was stated to have been a left-handed child; a flannelette petticoat which she was wearing at the time was not burnt. She was forthwith admitted into the North-Eastern Hospital for Children and four days later, owing to a great rise in her temperature and the development of a red rash upon her body, she was diagnosed as suffering from scarlet fever and was dealt with accordingly. The skin of the left arm sloughed and she died on Nov. 29th, said Dr. E. W. Goodall, from septicæmia and collapse, both consequent upon the burning. The coroner, in commenting on the

improbability of infection by scarlet fever in this case, stated that he had under his consideration a very similar case ten days previously, and that during the past ten years a score at least of these cases had come before his courts; there was no blame to be attached to the local medical practitioners for the wrong notifications, as it was their duty to protect the public if there occurred in a patient signs and symptoms which indicated that there was even a slight chance of infection; nevertheless, expense and annoyance followed from their precautionary action, for the local sanitary authority had to disinfect the suspected children's homes and the school attendance officer had to prohibit any children in the affected house from going to school.

THE TREATMENT OF CONVULSIONS IN INFANTS.

To the Editors of THE LANCET.

SIRS,—The usual treatment advocated and practised in convulsions in infants, which I have been in the habit of following myself, is to place the infant in a warm bath, apply cold water or ice to the head, and administer bromides. This is no doubt effective in a certain number of cases; but very frequently it has appeared to me that it produced very little immediate effect in the way of either relieving the condition or preventing the recurrence of seizures. A considerable number of these cases are associated with, and I think produced by, a high temperature occurring at the onset or during the course of the specific fevers, lung affections, or merely digestive disturbances. In fact, in many infants any affection which produces a considerable elevation of temperature seems to fling them into a succession of convulsive seizures. A plan of dealing with these cases which seems to me a more rational proceeding is to place them in a tepid bath or, having laid them on a blanket over a mackintosh, to lave them freely with water, not too cold but with the chill just taken off, followed by a small dose of phenacetin, two or three grains. In a few cases in which I have tried this treatment recently it reduced the temperature and caused a more rapid disappearance of the nervous condition than I have seen take place after the more usual treatment of the warm bath, &c. This method of dealing with such cases is no doubt known to many practitioners, but as there may be others who have not given it a trial, and as these cases occasionally terminate fatally, I have thought it worth while to draw attention to it.

I am, Sirs, yours faithfully,

Nov. 28th, 1905. EDGAR R. IVATTS, M.R.C.S. Eng., L.R.C.P. Lond.

THE TREATMENT OF URTICARIA.

IN answer to a letter under the above heading which appeared in THE LANCET of Sept. 30th last, in which "Puzzled Practitioner" asks for advice as to the best treatment for an intractable case of urticaria with nocturnal pruritus which has resisted all the usual methods of treatment, "R" writes from New York: "For the relief of nocturnal pruritus in urticaria give, when going to bed, pilocarpin (dose, one-eighth of a grain to one-quarter of a grain). Pilocarpin is satisfactory in the pruritus occurring in jaundice and presumably may be serviceable in pruritus from any cause."

DEFRAUDING THE BENEVOLENT IN THE NAME OF A HOSPITAL.

A WELL-DRESSED WOMAN, 28 years of age, was sentenced to four months' imprisonment recently at the North London police court for obtaining money by pretending that she was a collector soliciting contributions to hospitals. It was stated that the secretaries of several London hospitals had given information which had led to inquiries and to her arrest. Her credentials appear to have consisted in her plausible story and a book in which she entered the amount received in the presence of her dupe, a method very often adopted by persons of this class, who are usually able to show those who hesitate to give that some neighbour has already contributed. The only peculiarity of the prisoner's methods in this instance was a preference for persons with Jewish names, which led Mr. Fordham to observe, thereby confirming the experience of many hospital treasurers, that the better-class Jew is proverbial for his benevolence.

NON-INFLAMMABLE FLANNELETTE.

Mr. Charles Henry Whipp of 10, Aytown-street, Manchester, has sent us a specimen of "non-flam" flannelette which he claims is practically non-inflammable and that, further, the substance used in rendering it so is not washed out in the ordinary course of washing the material. We boiled the material in water and in soap and water for several hours and at the end of the experiment we found no evidence of the metallic salt used being dissolved out. Nor was the non-inflammable quality of the fabric diminished. On boiling with dilute hydrochloric acid traces of metallic salt appeared in the liquid. This, however, is not the kind of ordeal that the material is likely to be submitted to in practice. The contention is that the salt used actually combines with the fabric, and this would appear to be the case according to our experiments. The material is, of course, inflammable, but not with that energy and suddenness which make ordinary flannelette so dangerous an article of apparel.

THE SALE OF MEDICAL LITERATURE.

WE have received one or two replies to "Medico's" letter, which appeared in our issue of Nov. 25th, asking us for further information. Has "Medico" any catalogue of his library?

M.B. is thanked for sending us an interesting extract from a local newspaper. We cannot publish the article in our columns as it has been published elsewhere, nor do we think that the error is one that is likely to occur.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond street (2.30 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.).

SATURDAY (16th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Discussion on the Modern Methods of Diagnosis in Kidney Disease (introduced by Mr. H. Fenwick).

TUESDAY (12th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover square, W.).—8.30 P.M. The Special Discussion on the following Papers will be resumed:—Dr. A. E. Wright: The General Principles of Therapeutic Inoculation by Bacterial Vaccines as applied to the Treatment of Tubercular Infection.—Dr. D. Lawson and Dr. I. S. Stewart: A Study of some Points in Relation to the Administration of Tuberculin (T.R.) controlled by Observations of the Opsonic Index in Pulmonary Tuberculosis.—Dr. W. Bulloch: The Treatment of Tuberculosis by Tuberculin.—Mr. J. Pardoe: The Treatment of Tuberculosis of the Urinary System by Tuberculin (T.R.). A number of Patients will be exhibited at the meeting.

MEDICO-LEGAL SOCIETY (22, Albemarle-street, W.).—8.15 P.M. Exhibition of Specimens. Paper:—Dr. F. J. Smith: Post-mortem Examinations which do not reveal the Cause of Death.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Papers:—Mr. H. Rodwell: The Preparation of Compressed Tablets.—Mr. J. C. Umney and Mr. C. T. Bennett: False Oil of Savin.—Mr. E. M. Holmes: Notes on Indian Aconite Root, Zedoary Root, Dragon's Blood, and other Recent Donations to the Museum.

WEDNESDAY (13th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Papers:—Mr. H. Lett: Surgical Aspects of the Colon.—Mr. J. T. Fox: Considerations on the Management of the Large Intestine.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Meeting.

THURSDAY (14th).—CHILDHOOD SOCIETY AND THE BRITISH CHILD-STUDY ASSOCIATION (Parkes Museum, Margaret-street, W.).—8 P.M. Lecture:—Mr. H. T. Mark: Moral Intuition and Common Sense—a Study of Original or Inherited Moral Capacity. (Arranged by the British Child Study Association.)

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M. Cases and Specimens will be shown by Mr. L. Johnson, Mr. G. W. Roll, Mr. M. Hepburn, Mr. N. C. Ridley, Mr. N. B. Harman, Mr. J. H. Parsons, and Mr. C. Blair. 8.30 P.M. Papers:—Dr. D. M. Mackay: Light Sense in Strabismus.—Mr. F. R. Cross: Kroenlein's Operation for Tumours of the Orbit.—Mr. S. Mayou: On Cyclops.

FRIDAY (15th).—SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish-square, W.).—5.30 P.M. Discussion on Pleural Effusions, Serous and Purulent—(1) Pathology, Dr. J. G. Emanuel (Birmingham); (2) Symptomatology, Dr. G. A. Sutherland; (3) Treatment, Dr. E. Hobhouse (Brighton) and Mr. P. L. Mummery, and continued by Mr. L. S. Dudgeon, Dr. W. J. S. Bythell (Manchester), Dr. W. Ewart, Dr. G. Carpenter, and others.

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Paper:—Dr. A. Newsholme: The Relative Importance of the Constituent Factors involved in the Control of Pulmonary Tuberculosis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. G. Little: Clinique. (Skin.) 5.15 P.M. Dr. C. Mercier: Signs of Insanity.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Acute Pneumonia.

TUESDAY (12th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. L. Guthrie: Clinique. (Medical.) 5.15 P.M. Dr. S. Taylor: Acute Pneumonia.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. Batten: Acute Anterior Poliomyelitis.

WEDNESDAY (13th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. H. T. Butlin: Carcinoma is a Parasitic Disease. (Bradshaw Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. I. Cheatle: Clinique. (Surgical.) 5.15 P.M. Mr. H. L. Barnard: Diseases of the Gall-Bladder and Bile-Ducts.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. H. B. Shaw: On the Element of Prognosis in Pulmonary Tuberculosis.

UNIVERSITY COLLEGE, LONDON (Gower-street, W.C.).—4 P.M. Clinical Lecture:—Dr. Parsons: Ulcer of the Corpus with Hypopyon.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture:—Dr. G. Newman: Milk-borne Disease.

THURSDAY (14th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. C. Mercier: Signs of Insanity.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Lloyd: Anæsthetics.

HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Dr. Still: Infantile Paralysis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Lecture-Demonstration:—Mr. H. Cooper: X Ray Work.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Lecture:—Dr. McCann: The Treatment of Sterility.

CHARING CROSS HOSPITAL.—4 P.M. Mr. Clogg: Demonstration of Surgical Cases. (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M. Dr. M. Dockrell: Alopecia: I., Areata; II., Trichorrhexis; III., Seborrhœa. (Chesterfield Lecture.)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Lecture:—Mr. H. Barwell: The Nose and Throat in Chest Diseases. (Lecture II.) (Post-Graduate Course.)

FRIDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. N. Maclehose: Clinique (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Iritis, its Varieties and Treatment.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. A. Turner: Gait in Nervous Diseases.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 7th, 1905.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks
Dec.	1	30·16	N.E.	0·20	48	47	43	44	45	Overcast
,,	2	30·38	S.	...	54	49	40	42	43	Overcast
,,	3	30·45	E.	...	44	43	38	39	40	Overcast
,,	4	30·27	N.W.	...	43	43	38	39	40	Overcast
,,	5	30·00	S.W.	...	49	49	38	42	43	Overcast
,,	6	29·81	S.W.	0·09	66	54	42	42	43	Cloudy
,,	7	29·86	S.W.	0·04	60	57	43	52	53	Overcast

During the week marked copies of the following newspapers have been received:—*Yorkshire Post, Manchester City News, The Citizen (West of England), Devon and Exeter Gazette, Westminster Gazette, Globe, Cardiff News, Broad Arrow, Birmingham Mail, Reading Mercury, Liverpool Post and Mercury, Herefordshire Mercury, Mining Journal, Local Government Chronicle, Kensington News, Standard, Liverpool Courier, East London Observer, &c.*

Communications, Letters, &c., have been received from—

A.—Mr. E. Arnold, Lond.; Atomo Tobacco Co., Lond.; Alpha; Authors' Association, Darlington, Secretary of; Messrs. Anderson, Anderson, and Co., Lond.

B.—Mr. G. P. Butcher, Plymouth; Mr. O. Berthier, Paris; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Bass Bros. and Stevenson, Lond.; Birmingham University, Registrar of; Mr. F. D. Byrne, Lond.; Buntingford House Retreat, Buntingford, Secretary of; Mr. J. Bell, Hong-Kong; Mr. F. D. Bird, Melbourne; Messrs. Burgoyne, Burbidges, and Co., Lond.; Sir William H. Broadbent, Bart., Lond.; British Temperance League, Sheffield, Corresponding Secretary of; Mr. H. Butterfield, Northampton; Mr. F. B. Bennett, Margate; Dr. P. Palmer Burrows, Lindsay, Ontario; Messrs. Butterworth and Co., Lond.; Messrs. Bonthron and Co., Lond.

C.—Dr. W. Collingridge, Lond.; Cambridge Corporation, Clerk of; Mr. Edward F. Chandler, New York; Camwal, Ltd., Lond.; Lieutenant-Colonel R. Caldwell, R.A.M.C., Sheffield.

D.—Dr. Le Grand N. Denslow, Lond.; Dr. G. Dabbs, Lond.; Messrs. Down Bros., Lond.; Mr. E. Darke, Lond.; Dr. David Drummond, Newcastle-on-Tyne; Mr. Edgar L. Darter, Brooklyn; Messrs. W. Dawson and Sons, Lond.; Mr. G. Dubuis, Lond.; Dr. H. J. Davis, Lond.

E.—Dr. W. Arnold Evans, Bradford; Ekenberg Milk Products Co., Lond.; Mr. M. D. Eder, Lond.; Messrs. Elliott, Son, and Boyton, Lond.

F.—Mr. G. J. S. Fullick, Lond.; Frame Food Co., Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.; Dr. J. K. Fowler, Lond.; Mr. D. B. Foley, Wombwell; Messrs. J. S. Fry and Sons, Bristol; Firewood Trade Association, Walthamstow, Secretary of; F. H. S.; Dr. J. M. Fortescue-Brickdale, Clifton; Dr. R. Bruce Ferguson, Lond.

G.—Dr. Alfred S. Gubb, Algiers; Dr. Edwin B. Goldmann, Freiburg-in-Baden; Dr. W. Gordon, Exeter; Mr. C. H. Garland, Lond.; Gem Supplies Co., Lond.; Mr. N. E. Glanville, Lond.; Mr. J. T. Gradon, Oxford.

H.—Dr. John Haddon, Denholm; Dr. Francis Hare, Lond.; Mr. F. Rowland Humphreys, Lond.; Mr. Otto Holst, Eastbourne; Dr. John Hay, Liverpool; Messrs. Houghton, Mifflin, and Co., Boston; Highlands.

I.—Invalid Children's Aid Association, Lond., Secretary of; International Council of Nurses, Lond., Hon. Treasurer of; Dr. Irving, Lond.

J.—Dr. Robert Jones, Claybury; Mr. Herbert Jones, Hereford; Dr. S. Blake Jolly, Lond.; J. H.; J. W. L.; J. N.

K.—Mr. Skene Keith, Lond.; Mr. Arthur H. J. Keane, Lond.; Kny-Scheerer Co., New York; Messrs. R. A. Knight and Co., Lond.; Dr. Robert Knox, Lond.

L.—Mr. H. K. Lewis, Lond.; Mr. Leighton Leigh, Lond.; Dr. D. D. Logan, Newmains; Dr. P. W. Latham, Cambridge; Leeds and West Riding Medico-Chirurgical Society, Leeds, Junior Secretary of; Mr. R. Lake, Lond.

M.—Dr. W. MacLennan, Glasgow; Miss C. Moor, Lond.; Middlesex Hospital, Secretary-Superintendent of; Metropolitan Asylums Board, Clerk to the; Mr. Henry Morris, Lond.; Maltine Manufacturing Co., Lond.; Mr. Herbert Monckton, Maidstone; Mr. W. Ernest Miles, Lond.; Dr. Edwin R. Maxon, Syracuse; Mr. J. Y. W. MacAlister, Lond.; Medico-Psychological Association, Lond., President of; Mr. H. Marshall, Lond.

N.—Messrs. Newbery and Sons, Lond.; Messrs. J. and A. Nadin and Co., Leamington; *National Hospital Record*, Detroit, U.S.A.; New York Post-Graduate Medical School, Secretary of; North of England School Furnishing Co., Darlington, Secretary of; Messrs. Newbold and Co., Lond.; Mr. H. Needes, Lond.; Mr. J. C. Needes, Lond.

O.—Messrs. Ornatien Bros., Lond.; Odol Chemical Works, Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Dr. Llewellyn Phillips, Cairo; Dr. William Primrose, Glasgow; Mr. H. J. Parsons, Lond.; *The Plumber and Decorator*, Lond., Editor of; Messrs. Peacock and Hadley, Lond.

Q.—Queen Charlotte's Lying-in Hospital, Lond., Secretary of; Queen's College, Cork, Registrar of.

R.—Dr. G. E. Richmond, Lond.; Dr. A. W. Mayo Robson, Lond.; Mr. William Roper, Chideock; Dr. George Reid, Stafford; Dr. John J. Reid, New York; Royal Victoria Hospital, Bournemouth, Secretary of; Dr. A. Maitland Ramsay, Glasgow; Dr. J. D. Rolleston, Lond.; Dr. John Reid, Lond.; Dr. Charles Reinhardt, Lond.; Royal Waterloo Hospital for Children and Women, Lond., Secretary of; Messrs. Romeike and Curtice, Lond.

S.—Dr. J. Pollock Simpson, Lond.; Messrs. A. Spring and Co., Hull; Dr. D. Sandier, Constantinople; Salford Royal Hospital, Secretary of; Captain N. Scott, I.M.S., Vernoulllet, France; Messrs. J. P. Segg and Co., Lond.; Dr. J. P. Steele, Florence; Dr. Herbert A. Smith, Bromley; Dr. Harold Spitta, Lond.; Mr. A. Skene, Milltimber; Sirdar Rubber Co., Lond.; Scholastic, Clerical, &c., Association, Lond.; Messrs. G. Street and Co., Lond.

T.—Mr. Edward Turner, Lond.; Dr. J. P. Tildesley, Willenhall; Rev A. Tertis, Lond.; Dr. John Ogle Tunstall, Sutton Coldfield; *Temperance Record*, Lond., Editor of; Tottenham Hospital, Lond., Secretary of; Throat Hospital, Lond., Dean of.

U.—University of London, Principal of; United Alkali Co., Liverpool.

V.—Mr. W. Van Praagh, Lond.; Mr. J. W. Vickers, Lond.; Mr. Dennis Vinrace, Lond.

W.—Professor A. E. Wright, Lond.; Dr. C. J. Whalen, Chicago; Mr. J. H. White, Workington; Professor A. D. Waller, Lond.; Mrs. E. Wharton, Lond.; Mr. George Wilkinson, Sheffield; Dr. Henry White, Bradford; Messrs. J. Wright and Co., Bristol; Sir W. Whitla, Belfast; Mr. S. Wand, Leicester; Windsor and District Medical Society, Hon. Secretary of; West London Medico-Chirurgical Society, Secretary of; Messrs. H. Wilson and Son, Lond.; Wolverhampton General Hospital, Secretary of; Dr. J. S. Willock, Pittsburg, U.S.A.

Y.—Messrs. D. Young and Co., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Apollinaris Co., Lond.; A. L.; Messrs. Allen and Hanburys, Lond.; Ancoats Hospital, Manchester, Secretary of.

B.—Dr. W. A. Brown, Paisley; Dr. W. C. Bulloch, Lond.; Dr. T. Brushfield, St. Mary's; Dr. G. D. Bennett, Southport; Dr. J. M. Bennion, Petersfield; Mr. G. C. Bell, Frinton-on-Sea; Dr. R. L. Bowles, Sydney; Berrow's Worcester Journal Co., Worcester; Messrs. Barnett and Shirer, Lond.

C.—Dr. J. G. Cooke, Walsall; Messrs. Callard and Co., Lond.; Messrs. T. Christy and Co., Lond.; Mr. C. F. Carpenter, Bishop's Teignton; Canterbury Borough Asylum, Clerk of; Croydon Gas Co., Secretary of; Cambridge Typewriting Agency, Lond.

D.—Mr. E. Doyen, Paris; Mr. H. Dwyer, Banbury; Mr. W. Dougal, Pittenweem.

E.—Mr. W. Eager, Winterbourne; Messrs. Evans, Sons, Lescher, and Webb, Lond.; E. M. P.; Exeter City Asylum, Clerk of.

F.—Mr. W. Foreman, Liverpool; Messrs. Flynn and Co., Cork.

G.—Dr. M. H. Gordon, Lond.; Galen Manufacturing Co., Lond.; G. T. E.; Mrs. Gordon, Welshpool; G. H. G.; Mr. S. G. Gordon, Newry; Dr. S. A. Gill, Formby; Mr. R. Gooch, Lond.

H.—Dr. E. C. Hulme, Rotherham; Messrs. Hooper and Co., Lond.; Mr. W. H. Hornibrook, Ingatestone; Mrs. Hawkes, Boguor; Messrs. Hastings Bros., Lond.; Miss Holmes, Cheltenham; Dr. A. Holt, Lond.; H. M. H.; H. D.; H. F. E.

I.—Dr. S. Irwin, Tockington; Invernith Lodge Retreat, Colinsburgh, Superintendent of.

J.—Dr. S. Jamra, São Paulo, Brazil; J. G. G. M.; J. F. R.; Jenner Institute for Calf Lymph, Lond., Secretary of; J. L. C.; J. F. W.; J. H. B.

K.—Dr. C. P. Knight, Edinburgh; Messrs. H. and T. Kirby and Co., Lond.

L.—Lightburn Hospital, Glasgow, Treasurer of; L. E.; Locum, Leytonstone.

M.—Dr. A. Marriott, Aldeburgh; Messrs. Matthews Bros., Lond.; Dr. A. Marité, Paris; Manchester Hospital for Consumption, Secretary of; M. T. S.; Mr. J. Minnick, Providence; Dr. W. R. Mander, Stockport; Mr. A. M. Moore, Weymouth; Moat House, Tamworth, Medical Superintendent of; Medical, Ruabon; Messrs. C. Mitchell and Co., Lond.; Mr. R. de Martini, Boxhill.

N.—National Dental Hospital, Lond., Dean of; *New Orleans Medical and Surgical Journal*, Manager of; Nottingham General Hospital, Secretary of.

O.—Mr. D. O'Sullivan, Kinsale.

P.—Mr. J. H. Pringle, Glasgow; P. M.

R.—Mr. R. A. Ross, Pontypridd; Mr. G. T. Revell, Horrabridge; Messrs. R. J. Reid and Co., Lond.; Mr. H. B. Rowbotham, Birmingham; R. G. B.; R. F. S.; R. R. M.; R., Market Drayton; Mr. Boile Ritz, Frankfurt; *Rochester Journal*, Manager of; Rex, Manchester; Royal Hospital for Incurables, Dublin, Registrar of; Radcliffe Infirmary, Oxford, Secretary of.

S.—Dr. T. A. Swan, Netherton; Sanitary Publishing Co., Lond.; Mr. R. B. Swinton, Lond.; Dr. C. Smith, Isleworth; Surgeon R. W. Stanistreet, R.N., Weymouth; Rev. A. Sinker, Lond.; Messrs. Spiers and Pond, Lond.; Dr. R. N. Sinclair, Barmouth; Dr. T. H. Suffern, Lond.; Mr. G. Spring, Grimsby; Mr. H. W. Scriven, Lond.; Colonel W. F. Stevenson, R.A.M.C., Weymouth; Dr. J. S. Stewart, Banchory.

T.—Mr. C. Turner, Manchester; Mr. W. G. Tucker, Napton; Captain W. Townley, Gayndah, Queensland; T. W. A.; Messrs. Truslove and Hanson, Lond.; Mr. P. Turner, Lond.; Mr. J. Thin, Edinburgh.

V.—Vinolia Co., Lond.

W.—Dr. C. Woodhouse, Esher; Messrs. H. Ward and Co., Lond.; Mr. H. T. Welch, Kirkby Lonsdale; W. S.; W. E. S.; Dr. H. H. Weekes, Lond.; Mr. W. F. Walker, Dinas Mawddwy; Dr. S. R. Williams, Buckfastleigh; W. H. R. T.; Mr. J. Weddick, Wailuku, Hawaii; Dr. F. Parkes Weber, Lond.; Dr. R. J. Warrington, Manchester; W. D.; W. H. W.

EVERY FRIDAY. **THE LANCET.** PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 0
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements and Situations Vacant	Ditto	0 4 6
	Every additional Line	0 0 6

Situations wanted: First 30 words, 2s. 6d.; per additional 8 words, 6d.
Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice but is in itself an *additional* advertisement.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 31, Rue Bapts, Asnières, Paris.